United Arab Emirates

برنامج الإمارات للخدمة الحكومية المتميزة
Emirates Government Service Excellence Program

GOVERNMENT SERVICES DEVELOPMENT GUIDE 2.0

THE EMIRATI WAY IN DESIGNING GOVERNMENT SERVICES

May 2023

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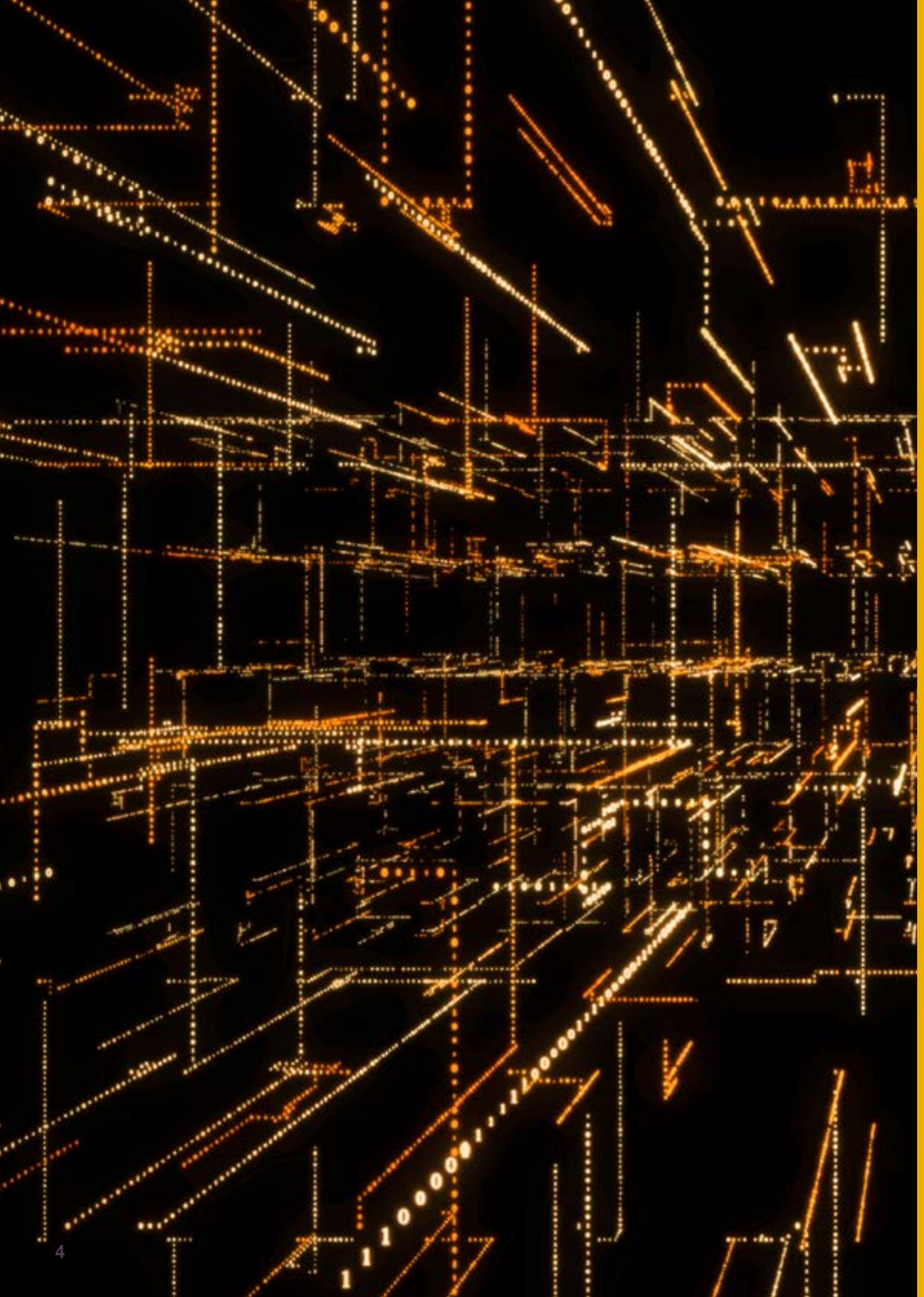
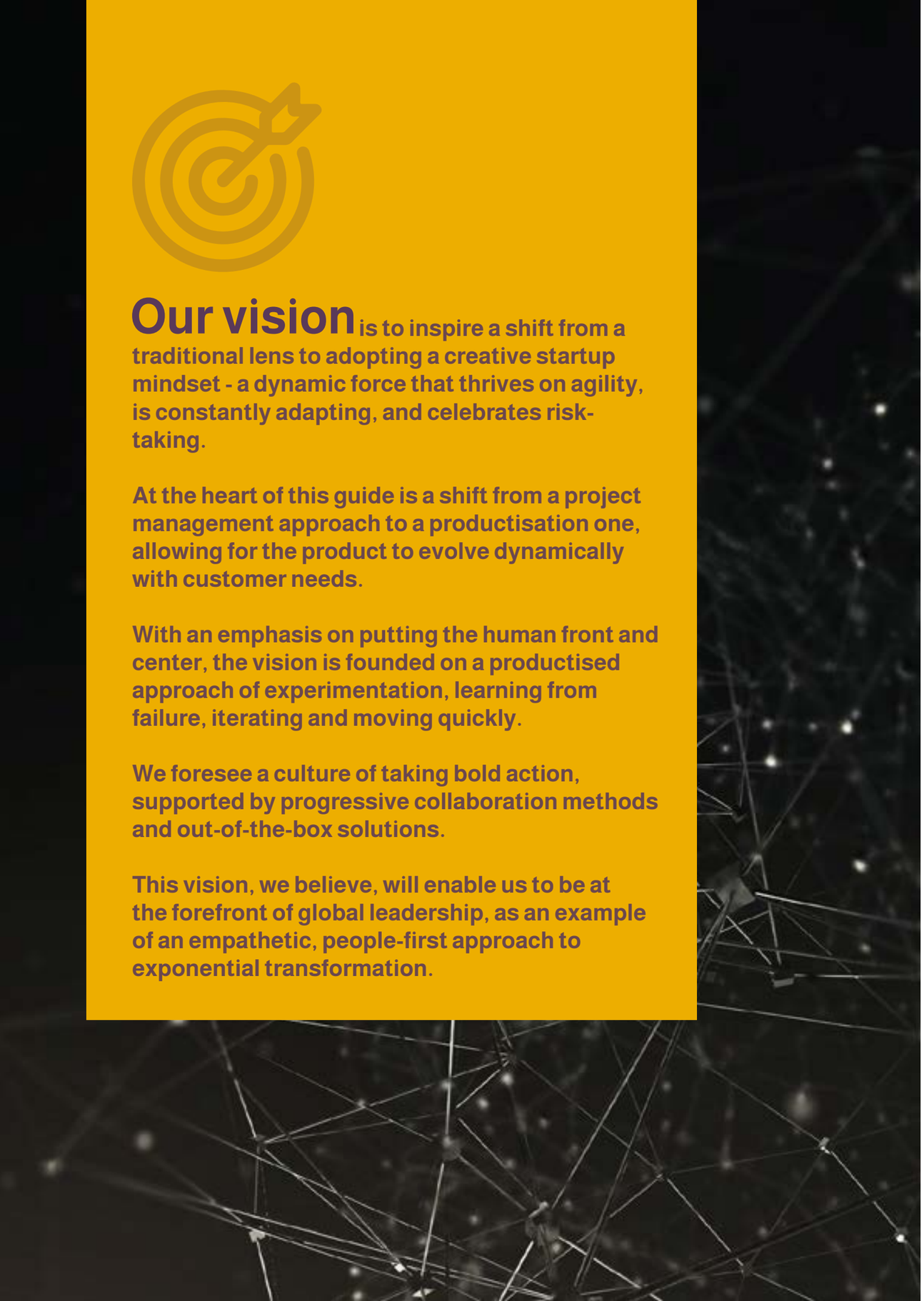


Context

We currently find ourselves in an unprecedented and exponential shift on a global scale. As the pace of technological evolution accelerates, there is a need for nimble, dynamic innovation which will ensure our position at the forefront of global competitiveness and leadership. Amidst this relentless change, however, it is crucial to maintain sight of the human element.

As societies are progressively impacted by these seismic shifts, the role of governance becomes invaluable in maintaining a harmonious connection with people and ensuring their ability to thrive along with these changes. Therefore, crafting policies and initiatives with a human-centric approach becomes integral, positioning humanity at the heart of any transformation.

By deeply comprehending and empathising with the needs, aspirations, and lived experiences of individuals, we can sculpt a future that is not only resilient in the face of change but one that also upholds the intrinsic well-being of humans.



Our vision is to inspire a shift from a traditional lens to adopting a creative startup mindset - a dynamic force that thrives on agility, is constantly adapting, and celebrates risk-taking.

At the heart of this guide is a shift from a project management approach to a productisation one, allowing for the product to evolve dynamically with customer needs.

With an emphasis on putting the human front and center, the vision is founded on a productised approach of experimentation, learning from failure, iterating and moving quickly.

We foresee a culture of taking bold action, supported by progressive collaboration methods and out-of-the-box solutions.

This vision, we believe, will enable us to be at the forefront of global leadership, as an example of an empathetic, people-first approach to exponential transformation.

About the guide

This guide is a comprehensive resource that aims to support entities in the UAE, international governments, and the private sector in adopting an entrepreneurial approach to service delivery.

With its productised lens towards services, this guide is designed to help different government entities to move from a siloed model to an interconnected, collaborative one, encourage experimentation, and facilitate rapid innovation.

The productised approach is also reflected in the longer service lifecycle, and positions the user at the core of both the design and decision-making process. It melds rapid, exponential progress with an approach rooted in empathy.

The guide also includes up-to-date inspirational content and defines common terminologies to encourage understanding and alignment.

Key Objectives

Entrepreneurial mindset

Facilitate the shift from the traditional mindset to a startup approach.

Productised approach

Transform how services are delivered, using cutting-edge product management ideas and agile methods.

Experiential design

Instill a user-focused approach, wherein a customers' needs and challenges, drive decisions and create personalised experiences.

Knowledge management

Create a common vocabulary for entities to share knowledge and align on methods.

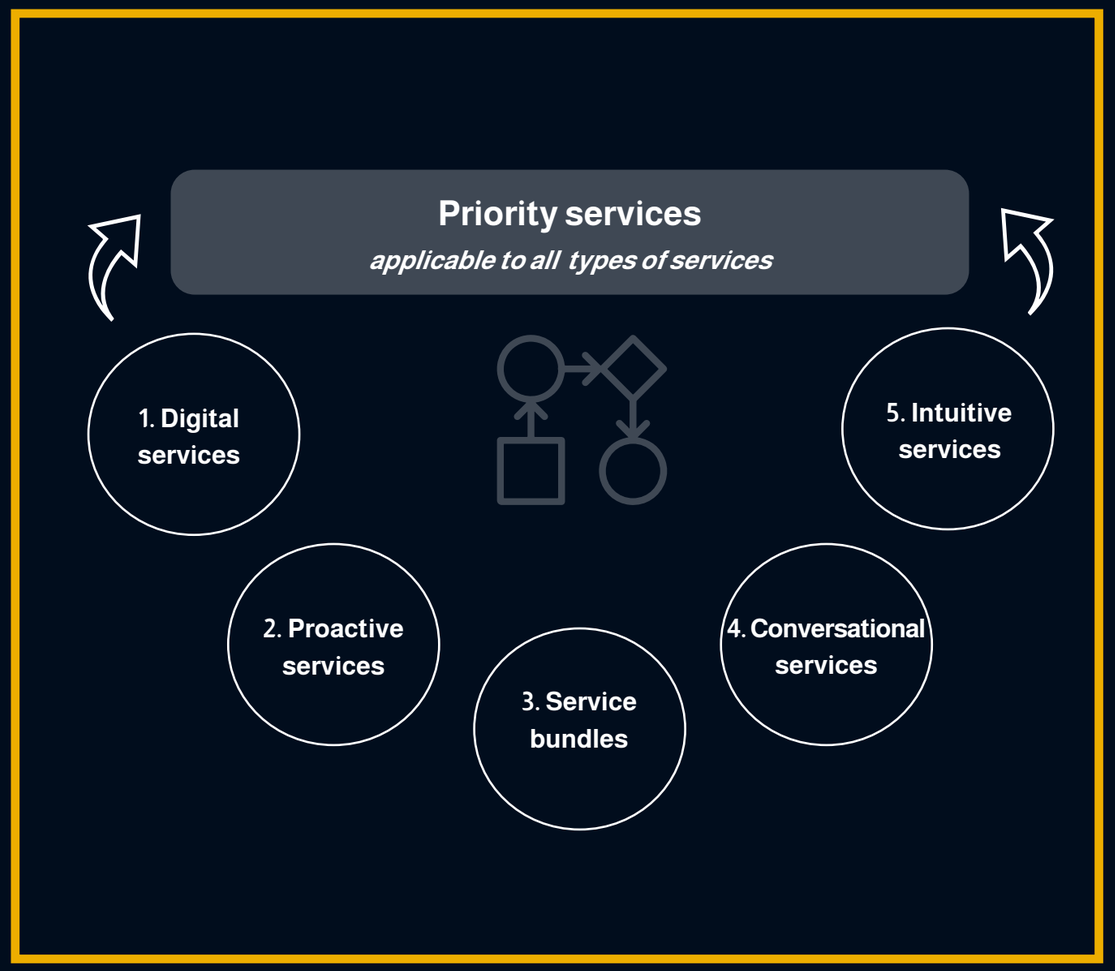
Target Audience

This guide is primarily intended for UAE government leaders, including service, design and development teams.

The audience also includes international government heads, and senior private sector executives.

Services 2.0

We have identified 5 types of services listed below:



Digital services

Government entities are required to provide digital government services as a foundation. The government service should be designed to be delivered digitally first, based on the digital user policy and digital government service.

Government entities should focus on developing their most important and impactful services, which have a significant effect on their users. These services should be prioritised in their development programs and projects. The importance of each service is determined through a feasibility study that considers the service's significance, the number of users, and the annual transactions. A comparison is made between the cost of service transformation and the return on investment.

Takes a Digital-First approach.

Leverage "Ask once" policy.

End service should have a significant impact on customers.

Allows for high personalisation.

EXAMPLE

An expat entrepreneur looking to start a business finds that he can complete the whole process digitally, with some of his information and documents pre-uploaded.

Proactive services

Government entities are responsible for anticipating and predicting the services needed by users based on their needs, preferences, and life events. This is done by utilising the data, information, and knowledge documents available to the government. The suggested services are proposed to users at the appropriate time, following the guidelines of proactive services.

Anticipating and predicting the services needed by the user.

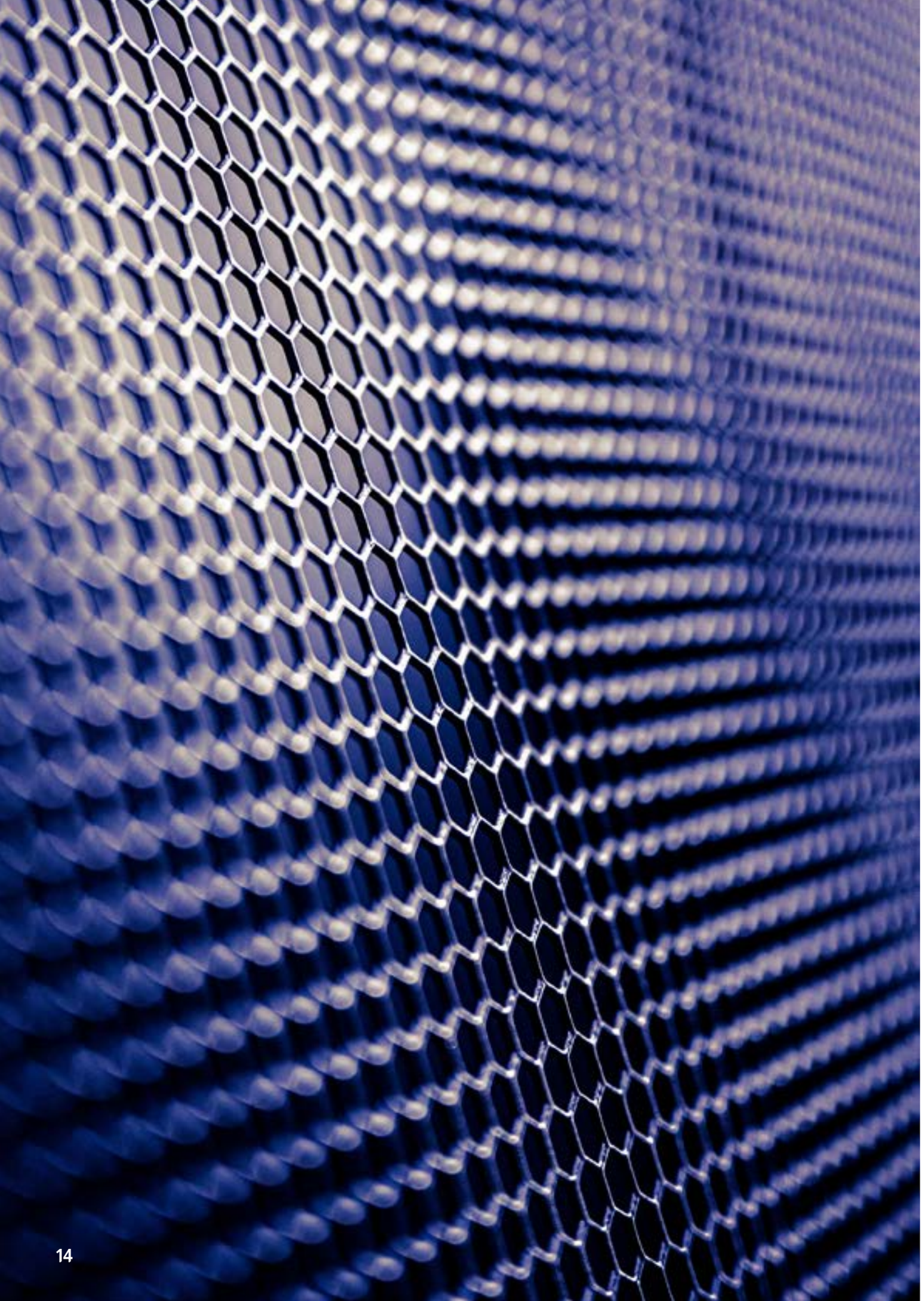
At the right time and with ease.

Providing them before they are requested.

Based on data and knowledge available to the government.

EXAMPLE

At the issuance of a birth certificate, the new born receives passport and emirates ID and is also added to the family book.



Service bundles

Service bundles are a collection of interconnected services that cover a specific stage in a person's or organisation's life event. When designing a service bundle, it is important and necessary to determine the relationship between the services and how each service is activated (i.e., what triggers the service) and how the next service can be initiated upon the completion of the previous service.

The outcome that matters to the user is the result of multiple services from multiple entities. The collection of final outputs of a specific service bundle is linked to a specific event in the user's life.

To obtain service bundles in one step

To reduce the number of visits

To be paid in one installment

To save time and effort for the user

EXAMPLE

Users that wish to obtain a business license, must obtain approvals from relevant government entities. Therefore, the user must acquire all the required approvals to obtain the desired outcome, which is the commercial license.

Conversational services

Conversational services refer to a type of service that utilises natural language processing and artificial intelligence technologies to enable human-like conversations between users and computer systems. These services are designed to understand and interpret user input in the form of text or speech and provide relevant and contextual responses.

Conversational services can take various forms, such as chatbots, virtual assistants, voice-activated systems, or messaging applications. They aim to simulate human-like interactions, understand user queries or requests, and provide information, perform tasks, or assist with various services.

These services are often used in customer support, public sector, healthcare, information retrieval, and other domains where interactive communication and assistance are required. They enhance user experiences by providing personalised and efficient support, answering questions, resolving issues, and automating routine tasks through natural and conversational interactions.

Offers a consistent quality of service due to pre-defined rules.

Can be accessed 24/7, enabling customers to get help whenever they need it.

Capable of communicating in multiple languages.

Instant response capability reduces waiting times for s.

EXAMPLE

A citizen facing an issue with renewing their driver's license gets help from the service's AI chatbot. It guides them through different options to resolve the issue. It can also pull history and data from various databases to provide the customer with a more personalised and efficient experience.

Intuitive services

Intuitive services prioritise user-friendliness, aiming to provide a seamless and effortless journey. They are designed to be easily understood and used without extensive explanation or training. These services naturally align with users' needs and workflows, allowing them to navigate and interact effortlessly. User-centred design is vital in creating intuitive services, as it involves deeply understanding users' perspectives, behaviours, and preferences. This understanding, combined with a strong focus on user experience (UX) design, ensures that the services meet users' expectations. Intuitive services often enable self-service, empowering users to fulfil their needs independently.

An intuitive service leveraging an application allows customers to navigate intuitively, and effectively use it without relying on manuals, extensive training, or the help of anyone. Information is easily and quickly accessible, and the whole experience is very straightforward.

Can be completed in the first attempt by 95% of the people.

Prioritises customer-friendliness, and a seamless, effortless experience.

Aligns with customer' needs and workflow.

Strong focus on UX design and prioritising customer understanding.

EXAMPLE

A driver seeking to settle a traffic fine interacts with the service without any additional support. The payment is made seamlessly through his digital wallet.

Priority services

These are the services that are of utmost importance and impact the users of government entities. Government entities must focus on these services in their developmental programs and projects related to services. As part of the development process, annual projects will be implemented to improve the user experience and provide services that align with the standards of excellent government service.

Priority services are determined through mutual agreement between the entities, and they should only be modified when absolutely necessary. It is possible for the complementary services to be a priority service without the subsequent sub-service being a priority.

Services that constitute the largest percentage of transactions.

Services that consume the largest proportion of resources.

Services that have been mentioned as a priority for development through customer feedback and mystery shoppers.

Services related to a specific and vital segment of the community (citizens, women, POD's, etc.)

Priority services could be of any type:

1	2	3	4	5
Digital services	**Proactive services**	**Service bundles**	**Conversational services**	**Intuitive services**

EXAMPLE

An important service for a large segment of users and represents the majority of transactions for the government entity's services.

Focus Areas

The transition from a project to a product mindset is defined by a change in focus. In a traditional project management approach, a successful project is one that is delivered within the agreed constraints of time, scope and budget. In the productised approach, however, success is defined by a customers' needs being met.

The six focus areas represent transformative mindsets that facilitate the transition towards a product-centric approach.They are supported by robust strategies to foster these mindsets within teams and entities, and serve as a foundation for the design principles.

1. **HAVE A GROWTH MINDSET:** Diverse skill set and upskilling
2. **TAKE OWNERSHIP:** Commitment and accountability for actions
3. **THINK BIG:** Bold, creative and outside-the-box thinking
4. **ACT AS ONE TEAM:** Collaboration and support amongst all
5. **ACCELERATE:** Move with speed and agility
6. **ADOPT HUMAN CENTRICITY:** People at the centre of all our work

Focus Area 1

Focus Area 2

Focus Area 3

Focus Area 4

Focus Area 5

Focus Area 6

HAVE A GROWTH MINDSET

Diverse skill set and continuous upskilling

A growth mindset is intrinsic to the startup approach. As one of the core focus areas of this guide, this paradigm encourages entities to commit to continuous upskilling, and working with multi-disciplinary teams.

A productised approach runs on short development cycles that emphasises swift turnarounds and varied specialised skill sets. This calls for a culture of self-learning, cross-skilling and working in multi-disciplinary teams that bring a range of knowledge, perspectives and skills. Cross-functional teams can also better understand and anticipate diverse customer needs, and are highly flexible in response to evolving requirements. This results in product outcomes that are highly efficient and creative.

Strategies to leverage a growth mindset can include:

Build agile squads

In the traditional model, individuals with the same skills usually come under one same team. This can decrease flexibility and hamper communication. An agile squad, however, is a small multidisciplinary or cross-functional team that is majorly self-managed and is excellent at teamwork and cross-collaboration.

Form diverse teams

Choose candidates with diverse skills, experiences, and perspectives during the hiring process; this includes specialists and generalists drawn from varied disciplines. Explore hybrid models that allow for a combination of in-house talent and external consultants.

Create a learning culture

Encourage a culture of continuous learning and improvement, where upskilling is not only welcomed but rewarded. Create access to training programs like workshops and online courses.

Encourage continuous development cycles

Implement continuous development cycles tailored to the needs of participants. This can include workshops, seminars, webinars, and online courses.

Encourage cross-training

Implement cross-training programs where employees learn skills outside their primary role. This can foster a more versatile and adaptable workforce.

Build role rotation programs

Allowing team members to rotate through different roles within the team or organisation can help them develop a broader range of skills and a better understanding of their colleagues' roles.

Nurture communities of practice

These are groups of people who share a common interest or field and come together to share knowledge and learn from each other. While not a team in the traditional sense, communities of practice can help foster a multidisciplinary mindset within an organisation.

TAKE OWNERSHIP

Commitment and accountability for actions

Taking ownership in this context is about committing to the entire lifecycle of a service, which reflects the user's dynamic requirements.

The success of the outcome depends on the entity taking responsibility for continually modifying and improving the service through its whole lifecycle. The result is a seamless, highly personalised user experience.

Taking individual accountability also has a marked effect on performance and motivation, and enhances trust and decision-making within teams.

Embracing pioneers

Every institution will appoint a Pioneer, who will serve as a link between his institution and the UAE design program for distinguished government services.

The pioneer will have the responsibility of overseeing, coordinating, and executing service-related tasks, as well as enabling the institution to carry out the assigned tasks.

Strategies to take ownership and increase accountability include:

Defining the importance of product ownership

Showing why the product owner is crucial, and the role that ownership plays in the success of the project.

Communicate goals and objectives

Understanding the larger goals and objectives of a project makes it more likely for teams to take ownership.

Specify roles and responsibilities

Clearly defining each team member's role, and what they are responsible for, can greatly improve accountability.

Cultivate transparency

Make it the norm to share as much information as possible about the project, its progress, and any challenges. This helps the team feel more invested in the project and promotes accountability.

Focus Area 1

Focus Area 2

Focus Area 3

Focus Area 4

Focus Area 5

Focus Area 6

THINK BIG

Bold, creative, and outside-the-box thinking

Thinking big and creative risk-taking are fundamental entrepreneurial traits. It involves breaking free from traditional patterns of thinking and exploring new perspectives and possibilities. This lens overcomes the limitations posed by attitudes that are averse to change, stigmatise failure, and rewards playing it safe.

Adopting a startup mentality demands a culture of creative risk-taking and bold vision.

Over time, thinking big and taking risks enhances collaboration, experimentation and competitive advantage.

Strategies to foster big, creative thinking include:

Reframe failure as a learning opportunity

Nurture an environment where failure is seen as an important part of learning and progress. Encourage people to take calculated risks, learn from their mistakes, and speak openly about failures.

Reward out-of-the-box thinkers

Acknowledge and reward those who demonstrate innovative thinking and take risks.

Create an open, questioning culture

Foster an environment where people feel safe to express unconventional ideas and challenge the status quo.

Introduce new and diverse ideas

Provide access to diverse global perspectives through brainstorming sessions, physical and online workshops, and cross-functional collaboration.

ACT AS ONE TEAM

Collaboration and support amongst all

A unified superteam, comprised of exceptionally skilled individuals working together, is a crucial element of the startup paradigm. The diverse knowledge and specialised skill sets, combined with effective collaboration enables them to tackle complex challenges and achieve remarkable outcomes.

High-functioning teams work together collaboratively and cohesively to achieve common goals and deliver exceptional results. These teams are characterised by effective communication, mutual trust, shared accountability, and a strong sense of purpose.

The impact of high-functioning teams can be transformative, leading to accelerated growth and game-changing breakthroughs. They also inspire and motivate other employees and teams, setting higher standards.

Strategies to build a unified superteam include:

Define clear goals and roles

Every member of the team should understand the team's mission, objectives, and goals. They need to be clear, specific, and measurable. Individual roles should also be defined so that there is no confusion and better accountability.

Nurture diverse, cross-skilled individuals

Choosing candidates from highly diverse backgrounds and skill sets creates a strong foundation for a superteam.

Build trust

Trust is fundamental to effective collaboration. Introduce activities to increase trust. Encourage team members to be open, honest, and transparent.

Leverage individual strengths

Every team member has unique strengths. Understanding these strengths and assigning tasks accordingly, not only increases productivity, but also improves job satisfaction.

Foster a culture of collaboration and innovation

Provide access to diverse global perspectives through brainstorming sessions, physical and online workshops, and cross-functional collaboration.

Focus Area 1

Focus Area 2

Focus Area 3

Focus Area 4

Focus Area 5

Focus Area 6

ACCELERATE

Move with speed and agility

A productised approach to services leverages speed and agility to experiment, fail fast and iterate.

Adopting an acceleration mindset paves the way for rapid growth, and the ability to learn and adapt quickly. Speed can make it easier to iterate on products, test new ideas, and innovate based on an immediate feedback loop. This can lead to continuous improvement of services. A culture of swift problem-solving can facilitate faster decision-making and execution, which can drive operational efficiency and cost-effectiveness.

Strategies to accelerate include:

Shift from an initiative to product approach

A productised approach breaks projects down into small iterations or sprints. Each sprint has a fixed timeline between one to four weeks, allowing for fast development and frequent releases of the product to be tested. This approach enables teams to respond swiftly to changes or new information.

Foster cross-functional collaboration

Incentivise open collaboration among different departments and teams. Cross-functional teams can be particularly effective at improving speed and agility because they bring together diverse skills and perspectives to solve problems and deliver services more quickly and flexibly.

Build self-organising teams

Teams that self-organise and make decisions can eliminate delays often caused by hierarchical decision-making processes.

ADOPT HUMAN CENTRICITY

People at the centre of all our work

The core essence of this guide is that the user is at the centre of all decisions and design.

By understanding and designing for the customer's needs, services can be highly personalised and relevant. Intuitive and easy to use, they increase adoption and satisfaction. Services that are designed from the user's perspective also tend to be more efficient and effective because they eliminate unnecessary steps and focus on what the user really needs. Importantly, human-centric service design can facilitate positive impact. By improving the lives of the users, it can create a ripple effect that benefits society as a whole.

Strategies to cultivate a human-centric lens include:

Understand the user

The starting point of any human-centric approach involves understanding the needs, preferences, behaviour, and motivations of target users. This can take the form of interviews, surveys, observation, and other types of field research.

Cultivate empathy

Empathy lies at the core of human-centric design. This involves being open, listening to users without judgment, and empathising with their experiences.

Design from users perspective

Instead of letting the technology or data define the solution, crafting with the user's viewpoint in mind will unearth the most relevant needs and problems.

Emphasise service quality assurance and prototyping

The quality of the services should be continually improved to reflect the user's current needs. Develop fast, early versions of your product and test them on a subset of your target users for feedback.

Design Principles

These six design principles are foundational guidelines to aid the smooth and effective implementation of the guide's purpose. They serve as value statements and design standards to ensure cohesive decision making, enhance communication and consistency, promote user-centric focus and ensure efficiency and quality.

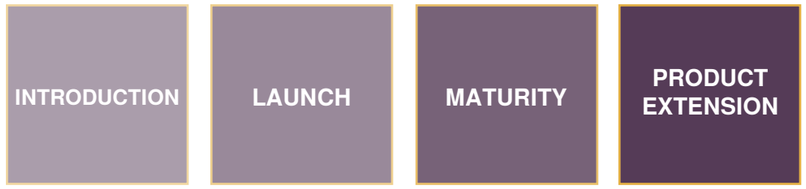
1. HYPER-PERSONALISATION
2. SIMPLICITY
3. INCLUSIVITY
4. AGILITY
5. EFFICIENCY
6. REAL-AUTOMATION

What is the Government product lifecycle?

The government product life cycle refers to the entire lifespan of a product, from the time it is conceived until the moment it is retired from the marketplace or replaced. This process encompasses all stages, from the initial development and launch to the eventual decline in sales.

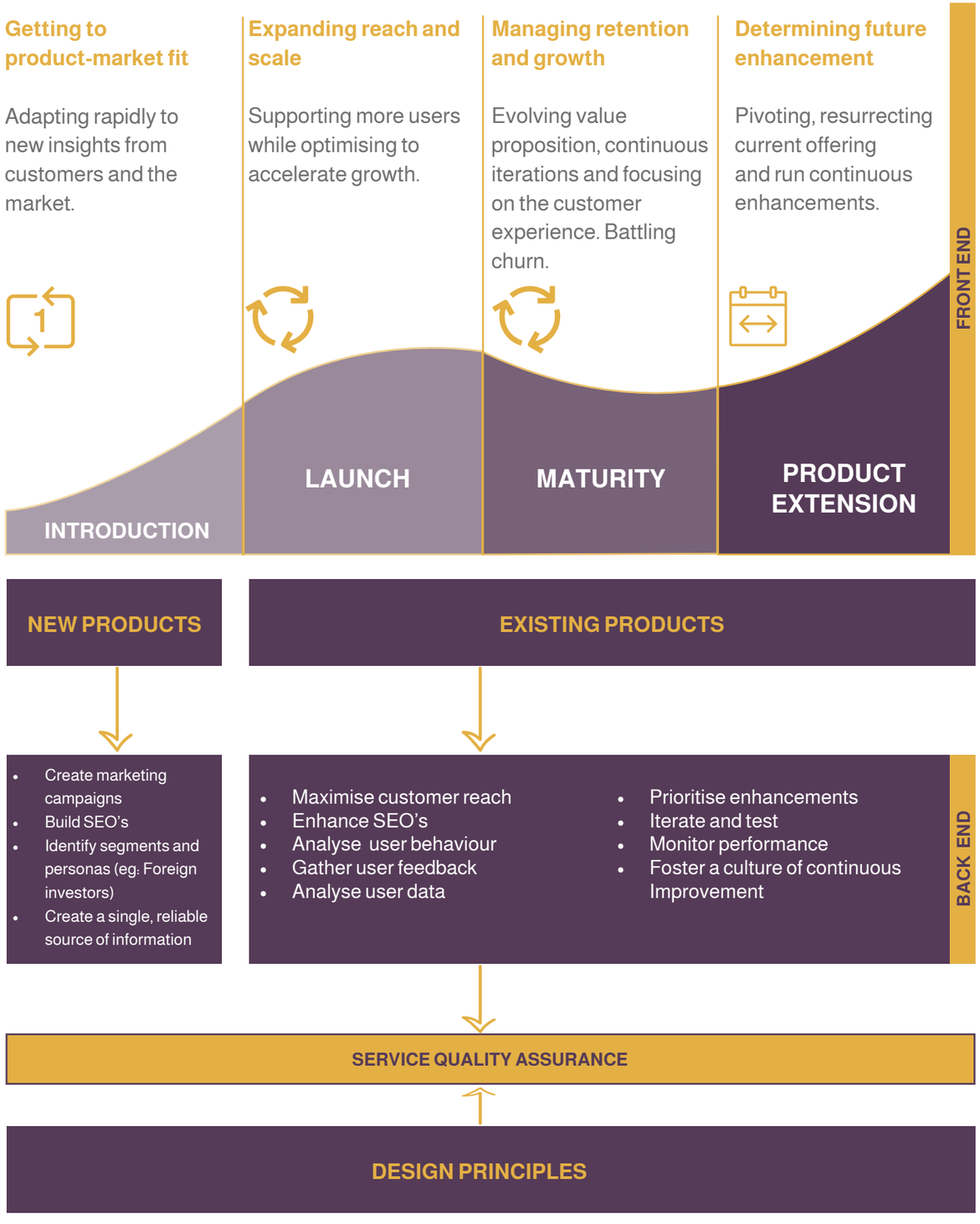
Similar to the predictable stages of human life — birth, childhood, adolescence, maturity, and end of life — products and services also go through analogous phases. To optimise results at each stage, product owners and managers adapt their strategies accordingly. The strategies employed may vary throughout the product's life cycle.

Generally, products pass through four stages that describe the product development life cycle:



The execution of action items within the product cycle can be accomplished through three ways:

Understanding the Government product lifecycle



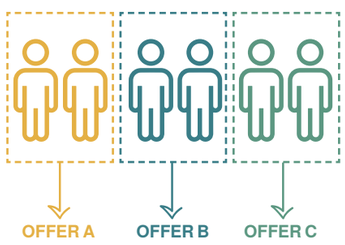
HYPER-PERSONALISATION

What is it?

Hyper-personalisation is an advanced approach that enables entities to personalise the end-user's experiences. It involves leveraging data, analytics, AI, and automation to create targeted and customised experiences.

Why is it important?

It increases the user engagement and satisfaction rate, leading to higher conversion rates, as users are more likely to take action on content that is specifically tailored to their interests and needs.



Personalisation based on user segments.

Hyper-personalisation based on user needs and behaviour.

THE IMPACT

Hyper-personalisation in the government sector can lead to better and more targeted services that cater to the specific needs and preferences of citizens. This can result in increased satisfaction, engagement, and trust in the government and its services.

How do you bring it to life?

- **Understand the users, their needs and challenges**
- **Deep dive into the data and gather insights**
- **Design an omnichannel experience**
- **Test experiences, iterate, and improve**
- **Embed proactiveness**

Understand the users, their needs and challenges

USER SEGMENTATION

To enhance the customer experience, an organisation must develop a shared understanding of the end-user, recognising that each customer segment possesses unique characteristics. The process of dividing customers into homogeneous groups based on common characteristics is known as “user segmentation”.

Multiple methods and metrics that can be used to segment customers, each with a different way of presenting information and strengths and weaknesses. Certain methods are particularly applicable to the public sector.

Example of user segments:

UAE Nationals

Residents

Domestic Workers

Tourists

Companies
Private and public sector

DEFINING PERSONAS

Personas are fictional characters, which are created based upon different types of data and research to represent user types that might use your service or product. Understanding personas is essential for providing users with an exceptional experience.

In defining personas, you will need to focus on **8 key components:**

Demographic information

This includes details such as age, gender, income, education level, and other relevant demographic characteristics that may affect the user’s needs and behaviour.

Goals and motivations

What are the user’s goals and motivations for using the product or service?
What are they trying to accomplish?

Pain points and challenges

What are the user’s pain points and challenges when using the product or service?
What obstacles do they face?

Behaviours and habits

What are the user’s typical behaviours and habits when using the product or service?
How do they interact with it?

Communication preferences

How does the user prefer to communicate?
Do they prefer email, phone, chat, or other channels?

Persona backstory

A persona backstory is a fictional narrative that helps designers understand the user’s history, personality, and background. This can include details such as hobbies, interests, and family life.

Technology proficiency

How proficient is the user with technology? What devices and platforms do they use?

Quotes and anecdotes

Including direct quotes and anecdotes from real users can help designers empathise with the user’s needs and emotions.

IDENTIFYING USER NEEDS AND CHALLENGES

User research is a crucial step in validating your personas, by following the below tools, you gain valuable insights that can help you make informed decisions about your product or service.

1. Surveys

Surveys are a quick and cost-effective way to gather feedback from a large number of users. Surveys can be conducted online, through email, or in person. They can be used to gather demographic information, feedback on specific features or user needs, and opinions about the product.

2. Interviews

Interviews involve talking to users one-on-one to gather in-depth insights about their needs, behaviours, and experiences. Interviews can be conducted in person, over the phone, or through video conferencing. They can be structured or unstructured, and can be used to gather feedback on specific features or to gain a broader understanding of the user's experience with the product.

3. Focus groups

Focus groups involve gathering a group of users together to discuss their experiences with the product. Focus groups can be conducted in person or online and can be used to gather feedback on specific features, to test new product ideas, or to get a broader understanding of the user's needs.

4. Usability testing

Usability testing involves observing users as they interact with the product. Usability testing can be conducted in person or remotely and can be used to identify usability issues and areas for improvement.

5. Analytics

Analytics can be used to gather data on user behaviour such as time spent on the product, pages visited, and actions taken. Analytics can provide insights into how users are using the product and can be used to identify areas for improvement.

6. Shadowing

This method involves observing and documenting how users interact with a service in their natural environment without interrupting their activities. A researcher or designer follows a user, taking notes on their actions, interactions and thought process.

It is important to choose the method(s) that best suits the project goals, budget, and timeline. Conducting user research can be time- consuming and costly, but it is a critical step in creating products and services that meet the needs of the target audience.

Deep dive into the data and gather insights

WHAT:

Collect user data

Once we have gained an understanding of the user's needs, challenges, and behaviour, we will need to analyse another set of data to further refine our approach and create a hyper-personalised experience.

Online traffic data

can provide valuable information about user behaviour, such as how many users are visiting the website/ app, how long they are staying on the channel, and which pages they are visiting most.

Call centre data

can be analysed to gain insights into common user questions and concerns and areas of complaints.

Social media metrics

such as likes, shares, and comments on government social media.

Survey data

can be conducted online, via email, or through phone calls. They typically involve asking a set of standardised questions to a large group of users to collect data on their behaviours, preferences, and attitudes.

Transactional data

as payment history or service application data can provide insights into user needs, behaviour and preferences.

Customer feedback

such as reviews and ratings, can provide data on how users perceive your product. By analysing trends in feedback over time, you can identify common pain points and prioritise improvements.

Mystery shopper

Customer pulse

Customer feedback survey

HOW:

Tools to define insights

Hyper-personalisation relies on a set of tools and technologies to define user insights:

In-house dashboards

Reporting tools

Government services observatory

AI algorithms domains including Machine Learning (ML), Natural Language Processing (NLP) and Large Language Model (LLM)

Cross-channel journey analysis

Entities need to continuously measure and optimise the personalisation strategy based on user feedback and performance metrics.

This helps to improve the relevance and effectiveness of personalised experiences over time.

WHY:

Bringing it to life

Impact of hyper-personalisation

Hyper-personalisation has the potential to provide numerous benefits for both citizens and the government sector. Here are some potential impacts of hyper-personalisation:

Improved citizen engagement

By providing personalised experiences and tailored service options, Hyper-personalisation can improve citizen engagement with government services and increase satisfaction with those services.

Better outcomes

By providing more personalised and relevant services, Hyper-personalisation can improve outcomes for citizens and increase the effectiveness of government programs.

Enhanced efficiency

By leveraging citizen data to personalise service delivery, government agencies can improve efficiency and reduce costs by streamlining processes and providing targeted services.

Increased trust

If done correctly, Hyper-personalisation can increase citizen trust in the government by showing that the government cares about each citizen's unique needs and is working to provide tailored solutions to their problems.

Use cases of hyper-personalisation

Potential use cases of how hyper-personalisation could be applied in the public sector:

Personalised citizen portals

A personalised citizen portal could provide a customised experience for each user, based on their individual needs, preferences, and interactions with government services. This could include personalised content recommendations, customised user interfaces, and tailored service options.

Customised service delivery

Government agencies could use data and analytics to identify patterns in service usage and provide customised service options based on each citizen's unique needs. For example, a healthcare system could provide personalised health recommendations based on a citizen's health history, lifestyle, and risk factors.

Personalised communications

By leveraging citizen data, government agencies could provide personalised communication to citizens about government services, programs, and initiatives. This could include personalised messaging, tailored social media campaigns, and customised email marketing.

Adaptive learning programs

Government agencies could use adaptive learning programs to provide customised learning experiences to citizens based on their individual skill levels, learning styles, and needs. For example, a language learning program could adapt its lessons and exercises to each user's proficiency level and preferred learning style.

Design an omnichannel experience

OMNICHANNEL EXPERIENCE

Is a comprehensive approach to ensuring high-quality interactions between the government and customers across all available channels, rather than focusing on individual channels. Unlike multi-channel marketing, omnichannel design requires the development of a cohesive strategy that encompasses all possible forms of customer interaction, rather than just the most frequently used channels like websites and mobile apps.

MULTICHANNEL **vs.** **OMNICHANNEL**

The impact of developing an omni-channel experience

Convenience

Citizens can access government services on the channel of their choice, whether it be online, by phone, or in-person. This increases convenience and accessibility for citizens who may have different preferences or needs.

Efficiency

An omnichannel approach can streamline processes and reduce wait times by allowing citizens to complete transactions on their own schedule, and reducing the need for manual intervention.

Improved customer service

An omnichannel approach can provide a more personalised and responsive customer service experience, as interactions are tracked across channels, and information is shared seamlessly between service representatives.

Better employee experiences

Employees will feel more empowered in their jobs, as they are working within a system based on multiple channels that are robust, flexible, and effective.

Greater transparency

By tracking interactions across channels, an omnichannel approach can provide citizens with greater visibility into the status of their requests or applications.

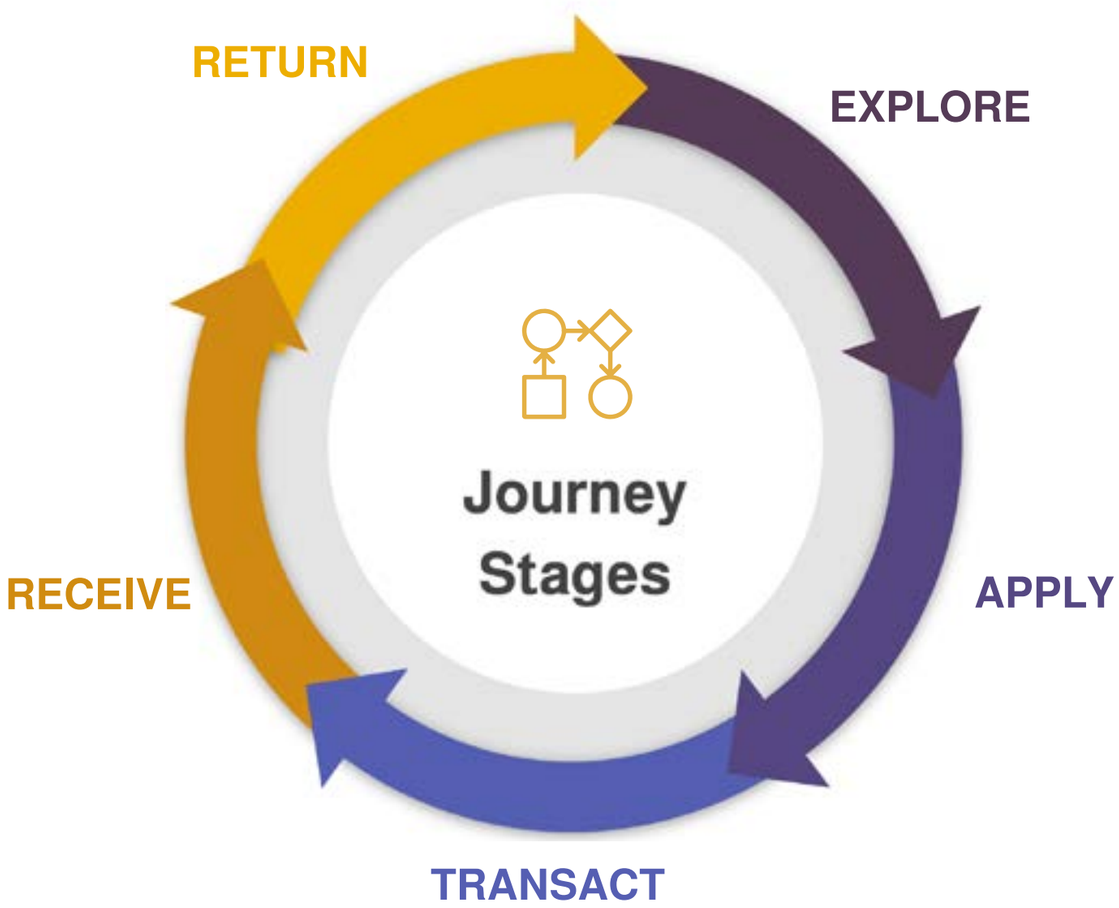
Better data collection

An omnichannel approach can improve the collection of data and feedback from citizens, which can help agencies improve their services and make data-driven decisions.

DEFINING
TARGET EXPERIENCES

Having gained a thorough comprehension of our personas, *their needs, and challenges, and substantiated our assumptions with relevant data and analysis,* the next step is to conceptualize and design the target state journey. The customer's journey is the sum of the interactions between the user and the entity, which are documented in steps in order to facilitate analysis and development. As for the federal entities, **the journey of the user should be designed in five key stages (see diagram below).**

The aim is to create a seamless and consistent journey experience for users as they interact with a product or service. It involves mapping out the different touchpoints and steps that a user will go through in their journey, and ensuring that each touchpoint is connected and contributes to an overall positive experience. **The goal is to make the user journey as simple, clear, and intuitive as possible.**



USE CASE
CUSTOMER JOURNEY FRAMEWORK

Persona A
Persona B
Persona C
Persona xxx

Data Source
- Survey
- Social media
- Transaction history
- Customer feedback

Identified Persona

Hammad | Emirati/Male 50 years old | Retired

Explore	Looks online for ways to start a business in UAE	Receives tailored ads on social media (to start a business)	Receives an email from Economic Development Authority on steps required to start a business
Apply	Logs in through UAE Pass	Reads the service card and confirms eligibility and requirement	Uploads minimal amount of documents and fills minimal fields and forms
Transact	Proceeds to payment gateway (Apple Pay)	Receives confirmation receipt	Tracks real-time application status
Receive	Receives digital license for his business		
Return	Renews proactively of license		

- Hyper-personalisation
- Personalisation
- Proactive

Common Components (Enablers)	Personalisation	SSO UAE Pass	Eligibility Engine	API integration with gov entities	Advanced payment gateways and digital wallets	Real time tracking	Proactive notifications

The impact of defining target state customer experience

Improved user experience

A unified user journey ensures that the user's interaction with the organisation is seamless and consistent across different touchpoints. This, in turn, enhances the user experience and reduces frustration and confusion.

Increased efficiency

A unified user journey helps the organisation to streamline its processes, reduce redundancies, and eliminate silos.
This results in increased efficiency and productivity.

Cost savings

A unified user journey can help to reduce the cost of service delivery by eliminating redundancies and inefficiencies in the user journey.

Better customer insights

A unified user journey enables the organisation to gather more comprehensive data on user behaviour and preferences, which can be used to improve products and services, personalise offerings, and create more targeted marketing campaigns.

CHANNELS AND TOUCHPOINTS

Having a single consolidated view of customer behaviour across various channels (web, mobile, and service centres) allows entities to develop a detailed user journey mapping interactions and touchpoints across various channels.

Maintaining consistency in user experience across channels is crucial. Whether a user applies for a service on a website or an app, the same forms, fields, and documents should be required. If the service takes 2 minutes to complete on the website, it should take the same amount of time on the app.

Traditional channels

- Service centre
- Call centre
- Website
- Smart application

Alternative channels

- Social media
- Virtual/ Smart centres
- Live chat (Whatsapp and Chatbots)

Test experiences, iterate, and improve

OMNICHANNEL EXPERIENCE DESIGN

An omnichannel experience is a cohesive and consistent approach to customer interactions across multiple channels and touchpoints. It involves seamlessly integrating different channels like service centres, websites, mobile apps, and social media platforms to provide customers with a unified experience. By breaking down channel silos and synchronizing data, businesses can deliver personalised interactions, increase customer satisfaction, and foster long-term loyalty.

Once the target experience is designed, entities need to test the product and run continuous improvement cycles, testing and iterating are essential steps in the process of Hyper-personalisation to ensure the best possible experience for users.

This can be conducted in two phases listed below:

Phase 1:
TEST

User testing

Conduct user testing with a diverse group of users to gather feedback on the experience.

This can be done through in-person or remote sessions, surveys, or other methods *(see more on principle 1: Hyper-personalisation).*

Analytics

Use data analytics tools to track user behaviour and gather insights on how users are interacting with the experience.

This can inform future design decisions and optimisations.

A/B Testing

Test different versions of the experience to see which one performs better.

This can be done with small changes to the design, copy, or functionality.

Phase 2:
ITERATE & IMPROVE

Continuous improvement

Use the feedback and data gathered to make continuous improvements to the experience.

This can include making small tweaks to the design or functionality or larger changes based on user feedback.

Agility

Use agile methodology to implement changes quickly and efficiently.

This involves breaking down larger projects into smaller, manageable tasks and regularly checking in on progress and making adjustments as needed. *(see more on principle 4: Agility).*

Embed proactiveness

PROACTIVE SERVICES

Proactive services refer to anticipating the needs of citizens and providing services before they are requested. This approach involves using the target state experience and life events of citizens.

This information needs to be leveraged to suggest relevant services or interventions at the right time.

By being proactive, governments can improve citizen satisfaction, increase efficiency, and reduce costs associated with reactive service delivery.

The definition of proactive services above is based on the following five components:

- Anticipating and predicting the services that the customer needs
- Providing the user with the services before it is requested
- Focusing on their needs, preferences, and lifestyle choices
- Providing the service on time and with ease
- Leveraging government data

The main classifications of proactive services:

Procedural services

Proposal or activation of providing services related to the execution of government transactions that have clear outputs associated with a service requested by the customer.

Informational services

Automatically conducting eligibility checks without the need for a request from the customer, and notifying them if they meet the requirements to access a specific service.

Eligibility screening services

Automatically conducting eligibility checks without the need for a request from the customer, and notifying them if they meet the requirements to access a specific service.

Reminder services

Proactively informing the customer about the upcoming service appointment.

The impact of proactive experiences

Eliminates the need for users/ citizens to be aware of the service's benefits, thereby reducing the risk of human error.

Enhances cost-efficiency compared to traditional services as it can be delivered more quickly, with less duplication, and fewer physical offices.

Lowers infrastructure costs and a reduced risk of fraud. These benefits translate into significant savings for the government on each transaction.

Improves outcomes for citizens, removes obstacles and inconveniences, making it a valuable resource for users with disabilities or special needs.

Provides a seamless and efficient experience. Proactive services can match or exceed the best digital experiences available in the private sector, delighting users in the process.

Use cases

In Estonia, the Unemployment Insurance Fund (EUIF) employs artificial intelligence (AI) to match job seekers with suitable positions according to their extensive work history. Additionally, the AI system can forecast industries where the likelihood of job displacement remains significant.

DELTA

Detroit Airport now offers parallel reality displays enabling up to 100 customers to view their personalised flight information on a single screen simultaneously. An overhead sensor detects passengers' presence and location using non-biometric object detection, adjusting their private zone for visible personalised content while navigating.


In the Netherlands and the UK, annual tax returns are pre-filled with existing information (for example, from payroll records). Citizens only have to check and, if necessary, correct or add to the information before submitting the return.

SIMPLICITY

What is it?

Simplicity refers to designing products and services that are easy to understand for users while also being transparent in their delivery.

This means removing unnecessary complexities and jargon and providing clear and concise information to users about what the service entails, how it works, and what the user's responsibilities are. The aim is to create a service that is user-centered, efficient, and trustworthy.

Why is it important?

By designing government services with simplicity and transparency in mind, governments can improve citizen trust and confidence, make services more accessible and effective, and ultimately improve the overall quality of their services.

THE IMPACT

Simplicity has a positive impact on end-users by improving their understanding, increasing their trust, and reducing frustration.
It also benefits government entities by achieving better outcomes, increasing efficiency, and improving reputation.

How do you bring it to life?

- **Provide clear, concise, and easy to understand information**
- **Use plain language to describe service details**
- **Simplify the service to make it intuitive**
- **Design a user-friendly interface, easy to navigate**

Provide clear, consistent and easy to understand information

Focus on the user

Write from the user's perspective and address their needs and concerns. Use "you" instead of "the user" or "the customer."

Be clear and concise (service name)

Choose concise service names consisting of a maximum of four words. Ensure that the names clearly describe the purpose of the service. Maintain consistent language for service names across all channels, keeping them short, straightforward, and to the point.

Provide actionable information

Provide clear instructions and steps for users to follow, and include links or references to additional resources or support.

Be accurate and up-to-date

Ensure that all information provided is accurate, up-to-date, and relevant to the service being offered. Regularly review and update content as needed.

Use inclusive language

Use language that is inclusive and reflects the diversity of the community being served. Avoid using gender-specific language or making assumptions about the user's background or identity. Ensure effective translation of the service into other languages.

Comply with accessibility standards

Ensure that all content meets accessibility standards, such as providing alternative text for images, and using headings and lists to make content easier to navigate for users with disabilities *(see more on Principle 4: Inclusivity).*

Be consistent, not uniform

Use the same language and the same design patterns wherever possible. This helps people get familiar with our services, but when this is not possible, we should make sure our approach is consistent.

Follow branding and style guidelines

Use branding and style guidelines provided by the government to ensure consistency and maintain a professional appearance.

Use plain language to describe service details

WHAT DOES “PLAIN LANGUAGE” MEAN?

It means communicating information in a way that is clear, concise, and easy to understand for the target audience. It involves avoiding complex terminology, jargon, or technical language that may be unfamiliar or confusing to users. Instead, it involves using simple and everyday words, short sentences, and clear headings to convey the necessary information to the user.

The goal is to make the service details accessible and understandable to the widest possible audience, including those with low literacy or limited language proficiency.

Users should be able to:

- **Gain an understanding of the service instantly.**
- **Determine the eligibility criteria for the service’s intended recipients.**
- **Identify the entities responsible for providing the service.**
- **Access frequently asked questions (FAQs) for the service.**
- **Have easy access to contact support if needed.**
- **Learn about the service fees, touchpoints, required documentation, and estimated processing time.**

HOW TO WRITE PLAIN LANGUAGE

Write content for everyone

Copywriting includes language, copy, readability, clarity, and tone of voice. It is essential that the entity is communicating to the user in a way that is **relatable and comprehensible**.

Be direct

Do not place any hints. Using phrases like ‘you must’ can help users understand when there is a step they have to follow. Information should be clearly presented and understandable by all users, including those as **young as 13 years old**.

Limit punctuation

Limit the use of punctuations as they slow readers down. Try **not to use punctuation** unless necessary.

Aim for simplicity

You can help people of all literacy levels understand what they need to know by organising information into **manageable chunks and using bullet points to break up long lists**.

Simplify the service to make it intuitive

INTUITIVE DESIGN
IN DIGITAL EXPERIENCES

Have you ever read your brand new iPhone's manual?

Intuitive design is invisible. It means that when a user sees it, they know exactly what to do. Design is intuitive when users can focus on a task at hand without stopping, even for a second.

> ***Any product that needs a manual is broken***
>
> **Elon Musk**

HOW CAN WE
BRING IT TO LIFE?

1. Understand your users

Getting intuitive design right starts with understanding your users.You need to figure out what's intuitive for them. An important concept to understand is current knowledge vs target knowledge.
(see more on principle 1: Hyper-personalisation)

2. Design to guide

Use diagrams, images, or videos to help users understand complex processes or procedures. Use icons or symbols to represent actions or steps to make the service more visually intuitive.

3. Test with physical environment

Conduct user testing with users who are representative of the target audience. These users should be given tasks to complete that simulate real-life scenarios in which they would interact with the physical environment, such as navigating a store or using a kiosk. Observing the users will provide insights into how intuitive and user-friendly the design is. Iterative testing and refinement can be conducted until the design is deemed intuitive and effective.

Design a user-friendly interface, easy to navigate

THE UAE'S
'DESIGN LANGUAGE SYSTEM' (DLS)

The Design Language System (DLS) ensures that users have a superior experience while using government portals. One of the key features of the portal is the ability for users to customise and personalise their experience, making it more efficient and user-friendly.

The DLS system consists of **three sections:**

- GUIDELINES
- COMPONENTS
- TEMPLATES

The DLS system can be downloaded from

https://dls.government.ae/

PRINCIPLES OF THE
DESIGN LANGUAGE SYSTEM (DLS)

Consistent

The guidelines, applications and components outlined in the design system follow a consistent format, be it container sizes or tone of voice.

Clear

The guidelines serve a clear purpose and communicate a unified message with regards to how components are applied.

Mindful

All elements included in the design system are designed with current and future expectations to ensure that there is no reason or need to break away from the foundations laid down.

Compliant

All components created can easily be adapted to suit the different needs of a specific Entity while still keeping unification best practices as mandated.

INCLUSIVITY

What is it?

Inclusivity in designing for a product or a service refers to the practice of considering and accommodating the diverse needs, abilities, and preferences of a wide range of users or customers. It involves creating designs that are accessible, usable, and enjoyable for all individuals, regardless of their age, gender, ethnicity, language, physical or cognitive abilities, or any other characteristic.

Why is it important?

Inclusive design aims to eliminate barriers and ensure equal access and participation for everyone. It involves conducting research and gathering insights about different user groups, understanding their unique requirements, and incorporating those insights into the design process. This can include providing alternative communication methods, considering different cultural perspectives, offering adjustable interfaces, or considering assistive technologies. To achieve inclusive design, entities need to focus on **two areas**:

1. **Accessibility**
2. **Usability**

THE IMPACT

By adopting an inclusive design approach, entities can create products and services that cater to a larger audience, enhance user satisfaction, and promote equal opportunities and social inclusion. It goes beyond mere compliance with accessibility standards and focuses on embracing diversity and providing a seamless experience for all users.

How do you bring it to life?

- **Adhere to accessibility tools and requirements**
- **Provide assisted digital support**
- **Offer services in alternative forms**
- **Conduct ongoing usability testing sessions**
- **Encourage users to use digital channels**

Adhere to accessibility tools and requirements

WHAT ARE THE ACCESSIBILITY REQUIREMENTS?

Entities need to adhere to the basic “Accessibility” requirements designed by the government of the UAE. The requirements have been built with the intention of making the content accessible to the widest range of users, regardless of disability or impairment.

Your voice

This section enables you to contact the Director General’s office directly to share your feedback.

Change text size

If you have difficulty reading the text on our portal, you can increase or decrease the text-size by clicking on the “A+” or “A-”.

Change color

If you face difficulty reading the text with some background color combinations, such as white text on a black background, you can change background colors in your browser easily.

Zoom screen

For those with poor visual ability to read text and view images, you can use the Zoom option from your browser to enlarge the page.

WEBSITE STRUCTURE

The UAE exclusively follows the recommendations laid down by World Wide Web Consortium (W3C) to maintain the website structure:

- **e-Services**
- **About the entity**
- **Services and activities**
- **Optional services**
- **Media hub**
- **Open data**

REMEMBER

The 2-steps approach to find a service

To enhance service discoverability, it is important to ensure that the service name clearly conveys its purpose using plain language. The service name should be concise, consisting of a maximum of 2-4 words. The 2x2 rule indicated that the user should be able to find any service in 2 ways and in 2 steps:

Search functionality
Implement a robust search bar that delivers accurate results based on user queries. Offer filters and advanced search options for refining results, allowing users to quickly access desired services.

Landing page
Showcase prominent services on the landing page, organised into categorised sections. Include visual call-to-action buttons for easy navigation to specific services of interest.

By combining an efficient search function and a user-friendly landing page, users can easily find services online, aligning with the “2x2 rule” for a streamlined user experience.

Provide assisted digital support

WHAT IS ASSISTED DIGITAL?

The term “Assisted Digital” refers to a collection of approaches, techniques, and efforts aimed at guaranteeing that nobody is excluded from accessing digital services. Since various services and customer segments need distinct kinds of assistance for a completely digital service to function, the concept of Assisted Digital encompasses a broad spectrum.

Assisted Digital must identify and develop:

Specialist solutions for online users with specific needs (e.g. Visually impaired, Disabled, Elderly, etc.)

Usage of audio and video content that have subtitles and transcripts to ensure people with hearing impairments can understand the content.

All the functionalities of the webpage must be operable through the keyboard. This ensures that users unable to use a mouse because of limited motor functions can still interact with the web content.

Utilisation of AI and machine learning to automatically create alternative texts for images and make them more accessible for people with visual impairments.

Live chat support tools such as video calls, chatbot, Whastapp and social media.

Usage of Sign Language Processing (SLP) is a field of artificial intelligence concerned with automatic processing and analysis of sign language content.

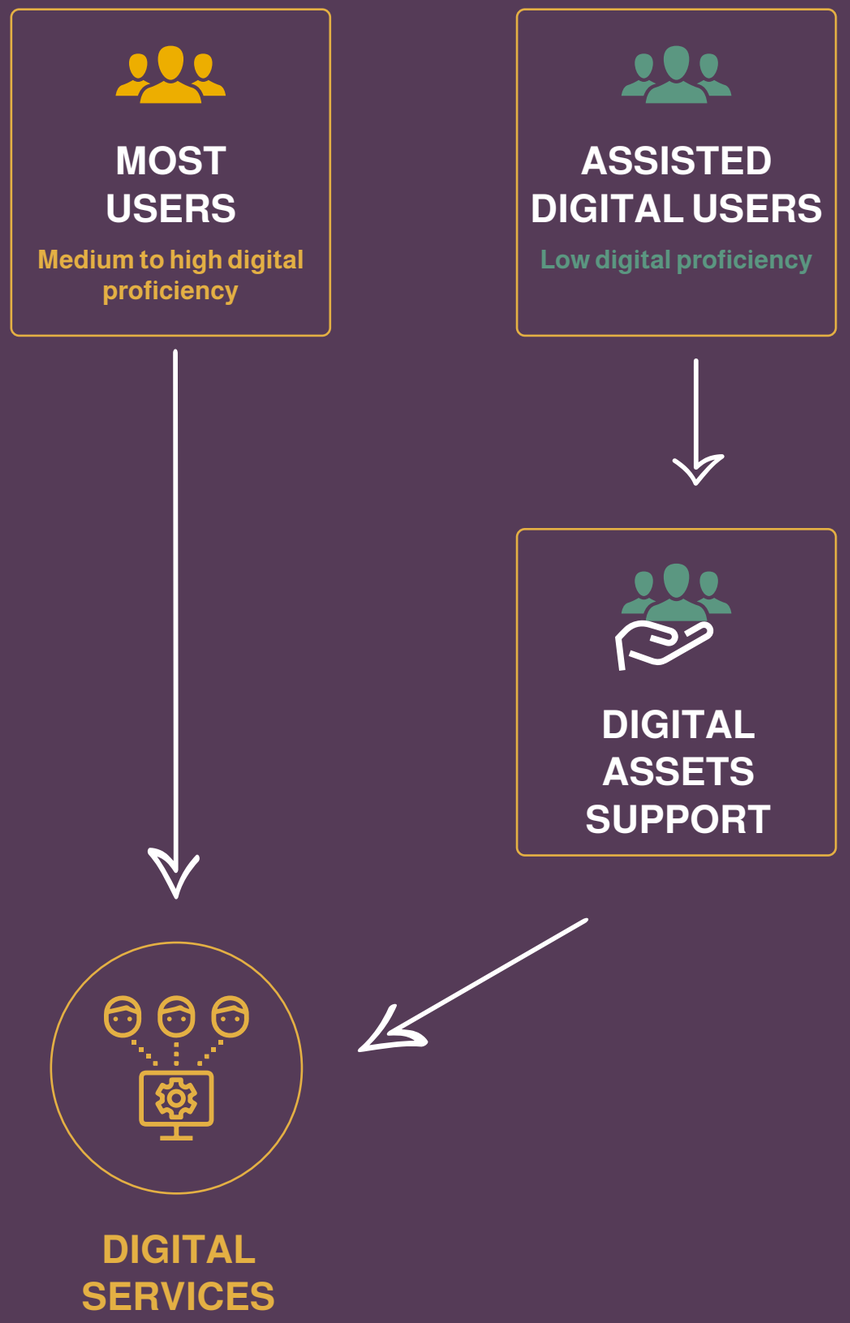
Search Engine Optimisation (SEO), ensures that a webpage is properly optimised and structured and improves overall usability and navigability of the site for users with disabilities.

Non-digital delivery channels (e.g.Service centres)

Create accessible physical environments which includes providing ramps, elevators, accessible parking spaces, and clear signage for individuals with mobility challenges.

Provide accessibility features such as tactile paving, braille signage, and audio announcements.

Ensure that employees are knowledgeable about the various accessibility features. This will enable them to provide appropriate guidance and support to customers with disabilities who may require specialised assistance.



Offer services in alternative forms

CONVERSATIONAL SERVICES

Conversational services refer to interactive systems or platforms that engage in natural language conversations with users.

These services leverage various technologies, such as chatbots, virtual assistants, and voice recognition, to facilitate communication and provide assistance or information to users in a conversational manner.

Different forms of conversational services:

Chatbots

Chatbots are designed to simulate human conversation through text or voice-based interactions. Chatbots can handle a wide range of tasks, such as answering queries, directing the user to the actual service, providing recommendations, or assisting with basic customer support inquiries.

ChatGPT | a form of a chatbot

ChatGPT can be leveraged to enable conversational services in the government sector, utilising its natural language processing capabilities and conversational abilities. Here are some ways it can be used:

Service guidance

ChatGPT can assist users in navigating government services by providing step-by-step instructions, explaining eligibility criteria, and offering guidance on required documentation or procedures.

Forms and applications

ChatGPT can help users complete forms and applications by asking relevant questions, clarifying inputs, and providing assistance throughout the process.

Policy inquiries

ChatGPT can provide information on government policies, regulations, and procedures, helping users understand and navigate complex policy frameworks.

Multilingual support

ChatGPT's language capabilities enable it to provide support and information in multiple languages, catering to diverse user populations and promoting inclusivity.

Virtual assistants

Virtual assistants are advanced conversational agents that use artificial intelligence to understand and respond to user queries or commands. They can perform tasks such as scheduling appointments, making reservations, providing personalised recommendations, or retrieving information from databases.

Voice-enabled devices

Devices like smart speakers or voice assistants, such as Amazon Alexa or Google Assistant, offer conversational services through voice interactions. Users can ask questions, give commands, or request information, and the device responds accordingly, providing relevant answers or performing requested actions.

Messaging apps

Many messaging apps incorporate conversational services, allowing users to interact with businesses or service providers through chat interfaces. Users can inquire about products or services, make purchases, track orders, or receive customer support within the messaging app.

Call centre automation

Conversational services can be utilised in call centres to automate customer interactions. Interactive voice response (IVR) systems use voice recognition and natural language processing to guide callers through a series of prompts or provide automated assistance before routing them to a human agent if needed.

The goal of conversational services is to provide users with a more intuitive and user-friendly experience by enabling natural language interactions. By understanding user intent, conversational services aim to deliver relevant and personalised responses, automate routine tasks, and improve overall customer support and engagement.

Conduct ongoing usability testing sessions

WHAT IS USABILITY TESTING?

Usability testing is the evaluation process of a product. It is conducted by observing how a representative group of users interacts with it. This hands-on testing provides product developers and marketers with valuable insights into the user experience (UX) as perceived by individuals who are not familiar with the product.

THE PURPOSE OF USABILITY TESTING

- Uncover problems in the design
- Discover opportunities to improve the design
- Learn about the user's behaviour and preferences

USABILITY TESTING IS AN ITERATIVE PROCESS

Usability testing is iterative, involving multiple rounds of testing and incorporating feedback to continually improve the product's usability based on user insights. To conduct a successful usability testing session, entities should:

SESSION PLANNING

CORE ELEMENTS

- SET USER TASKS
- FIND PARTICIPANTS
- FACILITATE / MODERATE TESTING

SET UP ENVIRONMENT: UX LAB

SERVICE QUALITY ASSURANCE

Session planning

Define what you want to test.
Ask yourself questions about your design/ product. What aspect/s of it do you want to test? You can make a hypothesis from each answer. With a clear hypothesis, you'll have the exact aspect you want to test.

Decide how to conduct your test
Define the scope of what to test (e.g. navigation) and stick to it throughout the test. When you test aspects individually, you'll eventually build a broader view of how well your design works overall.

Set your tasks

Prioritise the most important tasks to meet objectives
(e.g., complete payment), no more than 5 per participant. Allow a 60-minute timeframe.

Create scenarios where users can try to use the design naturally. That means you let them get to grips with it on their own rather than direct them with instructions.

Find participants

Know who your users are as a target group. Use screening questionnaires to find suitable candidates. You can advertise and offer incentives. You can also find contacts through community groups, etc. If you test with only 10 users, you can still reveal 85% of core issues.

Facilitate/Moderate testing

Observe and interview users. Notice issues. See if users fail to see things, go in the wrong direction or misinterpret rules. When you record usability sessions, you can more easily count the number of times users become confused. Ask users to think aloud and tell you how they feel as they go through the test. From this, you can check whether your designer's mental model is accurate: Does what you think users can do with your design match what these test users show?

Set up a testing environment (UX LAB)

Use a suitable testing environment such as UX labs for the session. The controlled environment allows for regulation of factors like lighting and distractions, ensuring participants can focus on tasks and provide unbiased feedback. Usability testing labs are equipped with specialised tools and technologies, such as eye-tracking devices and screen recording software, enabling accurate analysis of user behaviour. The presence of observers in dedicated observation rooms allows stakeholders to directly observe user interactions and gain valuable insights. The labs also provide a collaborative space for analysing results and fostering communication among stakeholders.

Service quality assurance

Service Quality Assurance is an on-going and iterative process that encompasses various activities such as measuring customer satisfaction, monitoring service delivery processes, conducting audits, and implementing corrective actions to enhance service quality and ensure consistent and exceptional customer experiences. The ultimate goal is to maintain high standards of service and continually improve the quality of services offered by an organisation.

Encourage users to use digital channels

HOW DO WE ENCOURAGE USERS TO USE DIGITAL CHANNELS?

Train employees

Ensure that staff in service centres and call centres receive proper training on providing support and assistance to users in using the service online. Employees should demonstrate patience and provide personalised assistance to guide users through the application process, whether it is done via the call centre or service centre, offering necessary support and guidance as needed.

Optimise mobile experience

Optimise digital channels for smart devices, as mobile accessibility is becoming increasingly important. Create mobile-responsive websites and mobile applications to provide a seamless experience across different devices and operating systems.

Simplify processes

Streamline processes and remove unnecessary complexities when utilising digital channels. Simplify procedures, minimise steps, and eliminate barriers to entry to make it easy and efficient for users to engage digitally.

Build an incentive program

Consider providing incentives or rewards for using digital channels. Encouraging users with incentives can motivate them to adopt and actively engage with digital services. eg: services consumed on digital channels are free of cost.

Design a user-friendly interface

Develop intuitive and user-friendly interfaces for digital platforms, ensuring that they are easy to navigate, understand, and use. Provide clear instructions and make the user experience seamless and enjoyable.

Provide user support and assistance

Offer comprehensive user support through various channels, including live chat, FAQs, and helplines. Provide prompt and helpful assistance to users encountering difficulties, ensuring a positive user experience.

REMEMBER

The 3-steps approach to complete a service

Government entities are required to adhere to the “3 steps at most” principle when designing digital services to ensure their complete accomplishment within a maximum of 3 steps, excluding the payment step.

The service should be designed in a way that does not require filling in any information, data, or uploading any documents that already exist in government databases (utilising digital identity, digital signature, and digital wallet). Additionally, it is necessary to establish links with the responsible entities for the reference data records.

The service stages should be clearly explained to the service recipient in a simplified manner, starting from submitting the request until completion, enabling them to easily and smoothly accomplish the service.

AGILITY

What is it?

Agility is not a development methodology. Instead it refers to an organisational model in which small, multidisciplinary, and supported teams work in iterative, fast-paced cycles while prioritising value.

Why is it important?

Today's digital world highlights the need for prompt, adaptable, and comprehensive organisations. Agile practices promote "Service Centricity" and adaptability. This allows government agencies to quickly respond to changing needs and priorities, which is essential in today's rapidly evolving digital landscape.

Agile approaches are a better fit given technological advancement and the pace of change we are currently experiencing. They mitigate risks by engaging end users early and continuously adapting to evolving requirements and environments.

Agility provides the ability to **quickly and effectively respond** to the needs and expectations of our citizens.

THE IMPACT
Agile is important for government services because it can help to deliver services that are more aligned with the needs of citizens, more efficient, and of higher quality. Implementing agile approach in the governments ways of working is imperative to achieve the goal of the UAE to be the best country in the world by 2071.

How do you bring it to life?

- **Design an agile approach for timely, flexible and tailored services**
- **Implement agile methodologies to increase team collaboration and flexible design**
- **Develop an agile roadmap to achieve faster launch times**
- **Perform iterative testing to deliver services exceeding customers expectations**
- **Measure success and keep track of quality parameters**
- **Set up agile management approach to continuously monitor and evolve the service**

Design an agile approach for timely, flexible and tailored services

KEY PHASES OF AN AGILE APPROACH

Here is a suggested approach to structuring an agile project, focused on iterating and delivering fast. It is equally important to watch out for some common pitfalls while structuring an agile approach.

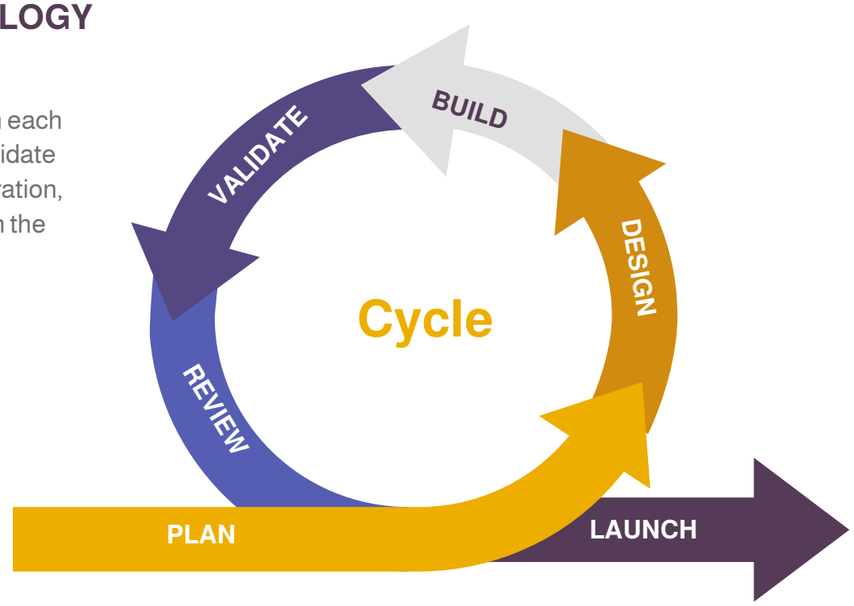
What to watch out for		What to do
• **Avoid overplanning**. Allocate more time to development and testing instead • **Involve stakeholders** at the plan phase to ensure accountability across teams	**PLAN**	○ Understand user needs to be addressed (Principle 1) ○ Define **product vision** and project **objectives** ○ Set up an **agile team** ○ Build **roadmap** with key milestones
• Ensure **clear communication** between teams to avoid misalignment • Manage **scope creep** and ensure changes are aligned to goals and timelines	**DESIGN BUILD**	○ Create **product backlog** with prioritised features ○ Breakdown the roadmap into **sprints** ○ **Prioritise** work for each sprint through sprint planning ○ Execute the sprint
• Consider **automating testing** as much as possible to ensure efficiency and accuracy • Watch out for **insufficient testing**	**VALIDATE REVIEW LAUNCH**	○ Use **rapid prototyping** and test concepts with users ○ Refine based on feedback ○ Measure **performance** using predefined metrics ○ **Optimise** based on **users feedback** and data-driven insights
• Implement proper **release management** to avoid use dissatisfaction • Do **not overreact to feedback** as all feedback may not be relevant	**REPEAT**	○ Conduct **sprint review** at the end of each sprint ○ Reflect on process during **sprint retrospective** ○ Repeat the process

INCREMENTAL AND ITERATIVE APPROACH

Unlike a traditional approach, an agile project delivers work in small and consumable increments. Requirements, plans and results are continuously updated.

AGILE METHODOLOGY

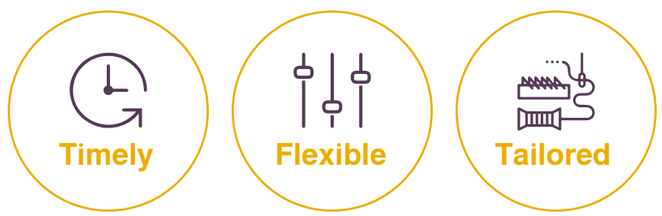
"Cycles" are miniature iterations of the project. In each cycle we design, build, validate and review. With each iteration, improvements strengthen the service offerings.



AGILE CHARACTERISTICS

1. Time-boxed, fast test-and-learn concepts, sprint ceremonies.
2. Incremental and iterative, sprint ceremonies.
3. Anchored in user research, refined based on user feedback.

Impact on service



Implement agile methodologies to increase team collaboration & flexible design

AGILE TEAM SETUP
ROLES AND RESPONSIBILITIES

While setting up an agile process, teams become central to the planning and design phase. Agile product teams are typically built around squads allowing them to scale up in case workload increases. Each squad is comprised of ten or fewer people, including one product owner, coach and a development team. Agile development teams may vary depending on project scope and size. Roles described below are illustrative.

PRODUCT OWNER

Decision-maker responsible for the vision, the backlog and the value delivered by the Product team.

COACH

Leader responsible for making sure agile practices and rules are applied by the team.

BENEFITS OF
AN AGILE TEAM

1
Work happens simultaneously, not sequentially, which allows for greater flexibility.

2
Needed capabilities are gathered upon set up, which ensures the right skills are available for execution.

3
Cross-collaboration is emphasised, which helps the team move faster.

4
Team morale improves, as it is designed to maximise communication and teamwork.

What to watch out for

Insourcing key roles
Some roles (e.g. service owners, designers) which have overall view of the product / service should not be outsourced to ensure delivery success and consistency.

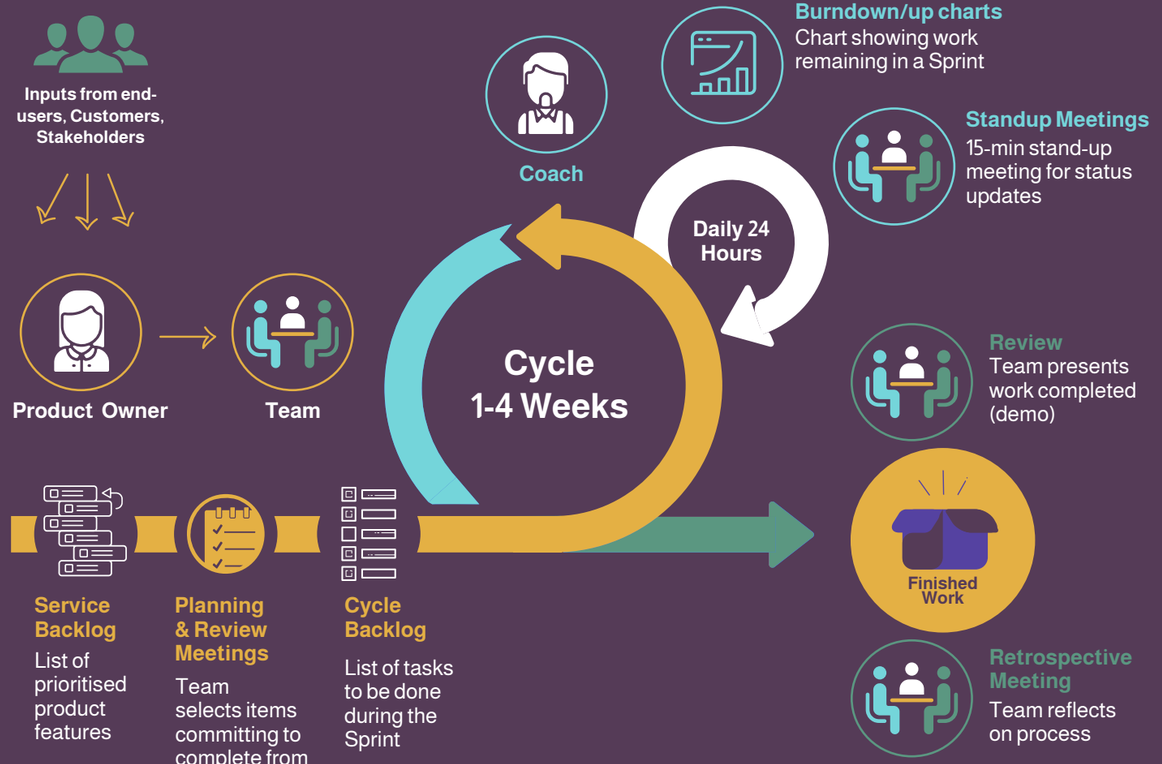
Reporting lines
While designing teams, mixed reporting lines of resources should be avoided to maintain clear accountability.

One team one product
Ensure that the squads are focused on launching one product / feature.

Dedicated team members
Resources within a team should be dedicated full time. Part-time resource allocation can hinder timely progress due to multiple reporting lines.

WAYS OF WORKING

Development is broken down into time boxed iterations named “Cycles” (1-4 weeks each)



In addition to roles and ceremonies, Agile projects include certain tools & artifacts. The most common are:

Board

Helps visualise sprint backlog and typically includes post-its on a whiteboard (to-do, WIP and done).

User stories

Teams breakdown features requirements into “user stories” that describe what customers want.

Timeboxing

Set period of time that a team works towards completing a goal.

Icebox

User stories recorded but not moved to development, are stored in the icebox.

Tools

Teams typically leverage project management (e.g., Jira or Trello), or collaborations (e.g., Slack, confluence) tools.

USE CASES

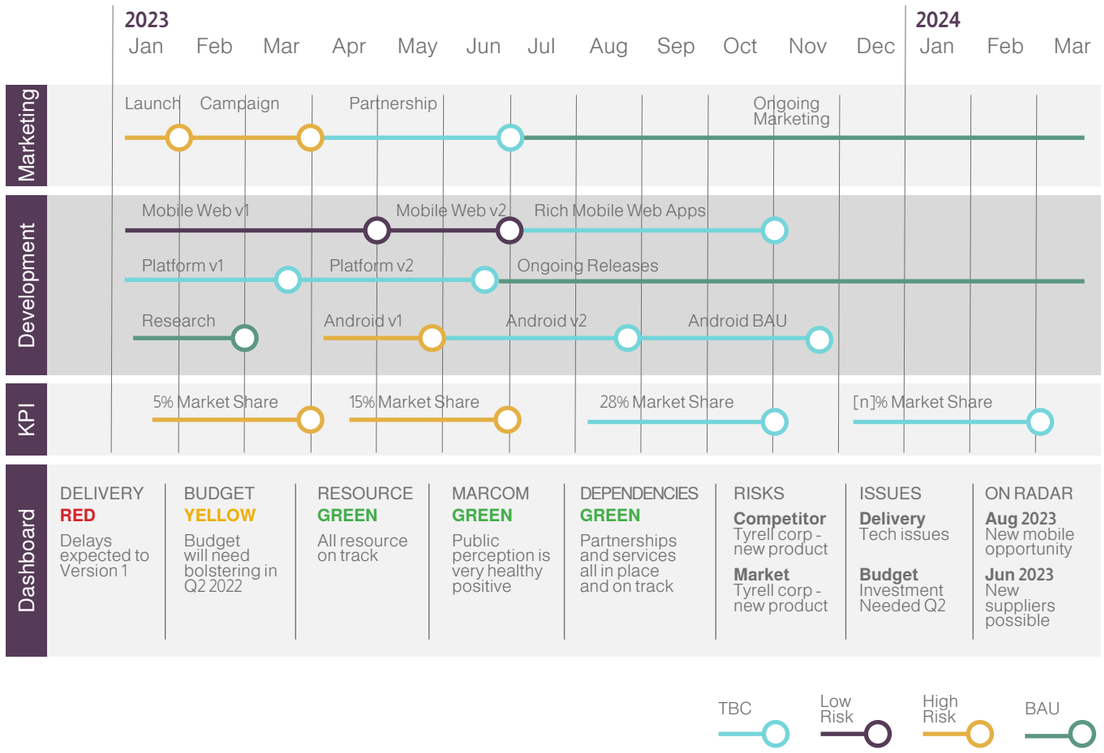
	ISSUE	BAD SCENARIO	GOOD SCENARIO
1	**User story - vague or incomplete user stories:** User stories should be specific, concise, and include all necessary details. Vague or incomplete user stories can lead to confusion or misunderstandings among the team members and may result in incomplete or incorrect development.	**As a user, I want a better interface for the website.** **Incomplete user story:** Does not specify customer's goal for improving search functionality. Vague about customer's objectives and reasons for better search functionality.	**A more complete user story:** "As a user, I want a more intuitive and user-friendly interface for the website. Specifically, I want the menu bar to be more visible and easier to navigate, with clear labels and descriptions of each menu item. This will help me find the information I need more quickly and efficiently and make my overall experience on the website more enjoyable.
2	**Timeboxing - not defining clear time boundaries:** Timeboxing requires clearly defining the start and end times of a task or activity. If these boundaries are not defined clearly, it can lead to confusion and misunderstandings about what is expected during the timeboxed period.	A government agency set a **three-month timebox to implement an online application** for a license, but the team didn't consider the integration time needed. Thus, the project took five months to complete.	A more effective timeboxing approach involves ensuring a thorough understanding of project dependencies and requirements upfront. This enables setting a realistic timeframe and adjusting as needed to meet deadlines and budget. Iterative development and testing methods can further detect and address issues early in the project.
3	**Iceboxing - focusing too much on details:** Iceboxing should focus on high-level priorities and should not get bogged down in details. Focusing too much on details can lead to wasted time and effort, and can distract from the most important tasks.	The government agency's new online platform neglected **to prioritise essential features and functionalities** critical to the user experience, opting to defer them to a later release. This proved to be a costly mistake, as citizens were left dissatisfied with the platform and the agency had to spend additional resources to implement the missing features after the platform's launch.	A more effective iceboxing approach for government services involves a prioritisation framework considering citizen needs, agency goals, and strategic priorities. This ensures critical features are prioritised in the initial release, while lower priority items are deferred. Regular review and reassessment of priorities aligns with evolving citizen needs and expectations.

Develop an agile roadmap to achieve faster launch times

BENEFITS OF AN AGILE ROADMAP

While multiple cycles can go on in parallel to design several features of a product / service, it is imperative to have a product roadmap to prioritise the delivery of the most important features over the rest. Having a product roadmap helps align stakeholders, prioritise features, provide a timeline, create flexibility, aid with resource planning, and build confidence in the team's ability to deliver the product or service.

Example of an agile roadmap:



GUIDELINES TO BUILDING AN AGILE ROADMAP

Define vision and objectives

Clarify overall vision and objectives (specific, measurable, attainable, relevant and time-bound), as well as outcomes and deliverables.

Identify and prioritise initiatives

Identify high-level initiatives linked to objectives and prioritise them (impact, value, dependencies).

Break initiatives into epics and user stories

Break each initiative into smaller units of work. Epics are large features, user stories are specific, actionable and can be tested independently.

Estimate and prioritise user stories

Assess effort for each user story using a relative scale (e.g., story points). Prioritise based on value, dependencies and risks (e.g., MoSCoW, Eisenhower).

Create a roadmap timeline

Visualise roadmap in time (spreadsheet, project management or roadmap tools). Allocate epics/ user stories to sprints. Keep roadmap flexible

Include capacity and constraints

Take into account team's capacity and external constraints or dependencies (e.g., resource availability, reliance on external stakeholder).

Comunicate and validate

Share roadmap and obtain feedback (e.g., Roadmapping workshop).

Iterate and adapt

Through sprints, review and update roadmap based on feedback, new insights and changing priorities.

Perform iterative testing to deliver services exceeding customers expectations

In an agile approach, the iterative testing process is important because it allows for the early detection of defects, improves quality, reduces risk, enhances user satisfaction, and facilitates continuous improvement. By testing iteratively or rapid prototyping, teams can ensure that they are delivering a high-quality product or service that meets user needs and expectations.

PROTOTYPING, LEARNING AND ITERATING

Prototyping as part of an agile methodology allows to create and test earlier versions of a service with users and stakeholders, providing an opportunity to validate assumptions, learn from feedback and iterate on the design

Rapid prototyping types

Paper

Low-fidelity prototypes using pen and paper or simple drawing tools.

Wireframe

User interface representations, created using specialised tools.

Interactive mockups

Prototyping using interactive elements to simulate users' interactions.

Functional Prototypes

Includes actual functionality and limited back-end integration. Gives a more realistic experience.

HTML / CSS

Prototypes used in web development projects, Interactive and can integrate with backend.

Minimum viable product mockups

Stripped down version of product with core features.

CASE IN POINT

Virtual reality (VR) can be used to simulate the experience of using a new product or service before it is launched. This can help the government to get feedback from users and to identify potential problems before they occur. For example, Foster + Partners is using VR to design and prototype new buildings.

VR allows architects to create immersive experiences that allow clients to walk around and interact with the building in a realistic way. This helps clients to visualise the finished product and to make changes before the building is constructed.

What to keep in mind

To ensure success, create a prototype that:

Keeps the end goal in mind

Accurately represents the final product / service.

Focuses on usability

Is easy to use and navigate.

Considers technical feasibility

It should be feasible to build and scale.

Is tested with real users

Ensure that it meets their needs and expectations.

Avoid getting too attached to a specific prototype and incorporate user feedback in the iteration process. Rapid prototyping can quickly test design ideas, but prototypes should be of sufficient quality and accurately reflect the final product.

Measure success and keep track of quality parameters

OVERVIEW OF AGILE METRICS BEST PRACTICE

BEST PRACTICES TO DEVELOPING MEANINGFUL MEASUREMENT

One crucial aspect of an agile project is defining clear success metrics and making sure measurements are conducted to keep on track. Here are a few examples:

1

Key metrics can include "lead" - the time required for a feature in the backlog to move into production, or 'velocity' - the number of user stories completed in one cycle.

2

Goal-aligned metrics can be evaluated from 'user adoption' or assessing 'customer satisfaction'. For all chosen metrics, make sure they relate to broader strategic goals as well as projects artifacts, roadmap, and backlog.

3

Validation metrics can take the form of "user stories" or "number of bugs." They need to motivate desired behaviours and emphasise a greater focus on results.

4

Establishing management commitment can be done through regular and frequent meetings to ensure involvement. Senior buy-in is crucial to the success of the project. Lack of leadership involvement and understanding is one of the most common reasons for project failure.

5

For data-driven decisions, leverage automated tools to capture performance. Increase automation as much as possible. *(see more in the Efficiency and Real-automation sections).*

6

To communicate performance, use development and management tools that allow the capture and display of metrics and measurements in real-time.

Set up agile management approach to continuously monitor and evolve the service

AN ALTERNATIVE TO THE TRADITIONAL PROJECT MANAGEMENT

An agile approach represents a way to transform the traditional program approach to better support programs leveraging agile methodologies

PROJECT APPROACH VS. AGILE APPROACH

	Project approach	Agile approach
Tracking	- Red, amber, green reports - Gantt charts - Status of work compared to plan	- Burndown charts - Story points per sprint/ velocity measurements - Delivery of working service
Coordination	- Matrixed hierarchy of managed projects - Centralised communication among team story points per sprint - Consistency from the top down	- Flat structure with self-organising teams - Direct cross- project collaboration - Continuous experimentation and innovation
Prioritisation	- Detailed specifications/ requirements - Value tracked in a detailed, long-term roadmap - Fixed schedule and prioritisation	- Development of a high- level backlog - Value delivery forecast in a conceptual roadmap - Frequent re-evaluation of needs
Governance	- Documentation driven - Approval required at each phase gate - Regular cadence-driven	- Value-driven - Infrequent intervention - Flexible and adaptable to meet team needs

WHAT TO KEEP IN MIND

It is helpful to have in mind the typical agile obstacles and anticipate them before starting an agile project:

Organisational culture

Bureaucratic, rule bound and siloed

- Education, training and mentoring.
- Show success on one small pilot project.

Adoption

Resistance to change

- Communicate purpose and processes clearly.
- Upskill employees in new technologies and processes.

Governance

Lack of consensus and transparency

- Get everyone on the same page.
- Create a culture of open sharing.

Senior leadership access

Lack of access to authority to get vital inputs

- Create access to key stakeholders.
- Establish a senior steering committee to gather critical leaders.

Decision making-authority

Hierarchical frameworks that hinder execution

- Empower PO to make most decisions.
- Develop a well-defined escalation procedure to quickly resolve complex inquiries.

EFFICIENCY

What is it?

Efficiency in government services refers to “doing more with less” or “doing better with the same”. It is about the optimal use of inputs (resources such as manpower, technology, time, and funding) and funding) to deliver the best output (high quality public services). In order to be efficient, the goal is to minimise waste, reduce costs and improve speed and quality while achieving the desired outcomes.

Why is it important?

In a globalised world, countries compete for investments, talent and tourism. To achieve that, providing seamless and hassle-free experiences to citizens, residents and businesses is a necessity. Delivering a world-class service experience increasingly relies on efficiency, which has become a cornerstone of modern public administration.

Private companies have sped up delivery times and improved user experience by focusing on end-to-end digital transformation of services, using agile, product-centric ways of working and investing in modern technology and systems. Government services are adopting a similar approach to drive further efficiencies, ultimately aiming at improving people’s lives.

THE IMPACT

Embracing innovative ways to maximize overall productivity drives service excellence through the adoption of a product mindset. Ultimately, efficient services ensure that individuals receive services in a timely and high-quality manner, resulting in heightened satisfaction and trust in the government.

How do you bring it to life?

- **Understand efficiency goals, impact and dimensions**
- **Ensure continuous monitoring and improvement of efficiency**
- **Identify opportunities, and unlock future efficiencies**
- **Strengthen data governance and data exchange models**
- **Build on digital enablers and capabilities**
- **Leverage automation technologies to drive further efficiency**

Understand efficiency goals, impact and dimensions

EFFICIENCY GOALS AND IMPACT

Because efficiency represents the maximisation of output, quality, and responsiveness of services, given a set amount of resources, typical efficiency goals are around:

Streamlining workflows, reducing redundancies and eliminating inefficiencies.

Maximising outcomes or outputs with minimum inputs, or at a minimum cost.

Managing time effectively, prioritising and eliminating time consuming or unnecessary steps.

In driving for efficiency, one key aspect is typically to meet or exceed Service Level Agreements (SLAs) in the most cost effective manner. Service Level Agreements (SLAs) are legally binding contracts signed between two parties, in which they agree on what services will be provided, how they will be measured and the resulting consequences. Having those agreements in place with internal and external partners ensures the adherence to appropriate service levels.

Efficiency impacts multiple aspects of a given customer experience such as:

Quantity
Service delivery throughput (e.g., number of calls answered).

Quality
Service delivery quality (e.g., caller satisfaction).

Cost
Cost per unit of output or outcome (e.g., cost per call answered).

Time
Speed of service delivery (e.g.,wait time).

Process
Effectiveness of underlying process(e.g., level of automation).

EFFICIENCY DIMENSIONS

There are multiple dimensions to consider when thinking through efficiency in government services:

Dimension	Potential impact
Operational efficiency involves streamlining processing, reducing waste and optimising resource allocation.	**Improved Service Level Agreements (SLAs) compliance, such as:** • Reduced time to deliver a service • Increased outcome • Higher quality (e.g., lower error rates)
Personnel efficiency refers to optimising the performance of government employees through effective hiring, training and performance management.	**Higher employee productivity and morale** • Increased services delivered per employee • Employee turnover rate • Employee satisfaction score
Technological efficiency includes leveraging modern technology such as real-automation	**Better use of human resources** • Greater number of services digitised • Reduced service delivery time • Higher accuracy in service delivery
Financial efficiency involves optimising the use of available funds, and improving budgeting processes.	**More services within the same budget, potentially expanding the scope of SLAs without additional cost** • Reduced cost per service delivered • Increased budget utilisation rate

Continuous monitoring of all those aspects is key to identifying bottlenecks, optimising resource allocation and benchmarking performance over time

Ensure continuous monitoring and improvement of efficiency

IMPORTANCE OF CONTINUOUS MONITORING TO IMPROVE EFFICIENCY

In order to improve efficiencies, precise measurement is crucial. Data-driven performance and efficiency tools help manage all dimensions of a service efficiency:

DIMENSION	TOOLS ROLE AND EXAMPLES	EXAMPLES OF METRICS THAT CAN BE MONITORED
Operational efficiency	**Aimed at identifying inefficiencies and streamlining processes** • **Business Process Management (BPM)**: map, analyse and automate workflows • **Project management**: track progress, coordinate tasks (e.g., Trello, Asana)	**Number of services completed in a given period (throughput)** **Percentage of tasks that contain errors and require rework (error rate)**
Personnel efficiency	**Focused on improving employee productivity and performance management** • **HR Management Systems (HRMS)**: track performance, support strategic planning (e.g., bambooHR, workday) • **Time tracking**: monitor activities to identify improvements (e.g., toggl, timedoctor)	**Tasks completed in a given period (productivity)** **Satisfaction levels through surveys**
Technological efficiency	**Designed to improve the use of technology in supporting efficiencies** • **Business intelligence and data analytics**: provide insights from data to support decision-making (e.g., Tableau, PowerBI) • **IT Service Management (ITSM)**: control IT service delivery, improve reliability and responsiveness (e.g., ServiceNow, Jira) • **Robotic Process Automation (RPA)**: automate routine tasks (E.g., UiPath, Blue Prism) • **Customer Relationship Management (CRM)**: Streamline interactions with public (e.g., Salesforce, Microsoft Dynamics)	**Time taken to respond to a request (response time)** **Time a system is operating and available (uptime)** **Level of customer satisfaction (user satisfaction score)**
Financial efficiency	**Intended for improving financial management and budgeting** • **Financial**: manage finances, track spending (e.g., quickbooks, oracle, netsuite) • **Budgeting**: support budget planning and forecasting (e.g., adaptive insights, planful)	**Percentage of budget used effectively (budget utilisation)** **Difference between budgeted cost and actual cost (cost variance)**

Identify opportunities, and unlock future efficiencies

REVIEW PROCESSES TO IDENTIFY UNTAPPED OPPORTUNITIES, AND UNLOCK FUTURE EFFICIENCIES

1

Identify areas of inefficiencies and streamline them (e.g., implementing automation) by conducting regular assessments (e.g., value stream mapping or business process reengineering). Note that those assessments should be ongoing and regularly reviewed.

Example: Illustrative value mapping exercise for Schengen visa application

- **Define scope:** end-to-end process of a Schengen visa application, starting from the initial customer inquiry to the final visa decision.
- **Identify steps involved in the process:** this may include
  - Initial inquiry and information gathering.
  - Document preparation and submission.
  - Application review and verification.
  - Payment processing.
  - Appointment scheduling and biometrics.
  - Visa decision and notification.
- **Map the current state:** Create a visual representation of the current state value map stream, and connect them in the order they occur. Include information such as time taken for each step, bottlenecks or delays encountered.
- **Identify value-adding and non-value adding steps:** analyse each step and classify value levels.
- **Measure key metrics:** such as cycle time (time it takes to complete the entire value stream) or lead time (time it takes from the customer's perspective.
- **Propose future state:** that addresses the identified bottlenecks and eliminates non-value-adding steps. Include areas where process improvements, automation or technology can be implemented.
- **Develop action plan:** that outlines specific steps, with responsibilities and timelines.
- **Implement and improve:** proposed improvements and measure impact on value stream .

2

Accelerate service delivery and save costs by working internally, as well as with other parties (inside or outside of the government) to identify synergies. Think creatively of existing resources that could potentially be re-used such as equipment, technology and expertise (e.g., hardware or software assets, IP, physical space, third-party contracts etc.) as part of other projects.

Leveraging existing technology to speed up a government service

- The USPTO's Government Patent Licensing Program (GPLP) enables businesses to freely license government-owned patents. It's open to all businesses, requiring an application with details on the business, desired patent, and proposed use. Successful applicants gain a free license for up to 10 years, fostering innovation with over 10,000 licenses granted. Examples of products include cancer diagnostic devices, Alzheimer's treatment drugs, and manufacturing efficiency software.

3

Design with efficiency in mind. Try to build solutions that could be reusable in the future, so that work is accelerated and costs are reduced.

Modular design and low code development

- Denmark has built a development platform that renders screens in a mobile app, based on the desired process flow for a transaction. Civil servants can customise the front-end experience for each process step, using a library of design elements and functionalities.
- With this low-code approach, IT resources are no longer a bottleneck to creating digital services; public authorities can focus instead on creating a delightful user experience and more efficient internal workflows. Projects that previously took months or years and required huge budgets now take weeks and incur little incremental cost for software development.

4

Foster a mindset of closer collaboration. Collaboration is extremely important in driving efficiencies (e.g., sharing expertise by pooling knowledge and skills).

Strengthen data governance and data exchange models

Data as a fuel for efficiency

Digitisation and automation are crucial components of driving efficiency. However, a key precondition to any digital and automated project is data. Data management is foundational to achieve efficiency, improve decision-making, enhance collaboration, streamline processes, and enable scalability. However, in order to manage data properly, clear governance and exchange models need to be defined.

Data governance model

A data governance model is a set of policies, processes, and standards that define how an organisation manages its data assets.

It provides a framework for ensuring the accuracy, consistency, security, and privacy of data across the organisation.

Data exchange framework

A data exchange framework is a set of guidelines and standards that enable the secure and efficient sharing of data between different entities.

The framework defines the rules, procedures, and technologies required for exchanging data in a trusted and reliable manner.

The purpose of a data exchange framework is to facilitate data sharing while ensuring data privacy, security, and compliance. It also allows entities to share data with partners, customers, and other stakeholders without compromising the confidentiality or integrity of the data.

In the absence of data governance and exchange models

There are a number of things that can go wrong. Some of the most common problems include:

Data inconsistency

Data stored across the organisation in different formats, systems, or locations can lead to inconsistencies and hinder obtaining a reliable view of information.

Integration challenges

Introducing new systems becomes complex without a framework, leading to costly integration projects and potential compatibility issues.

Data silos

Absence of a framework results in separate data maintenance by departments, limiting data sharing and collaboration, reducing visibility and access to critical information.

Data security and compliance risks

Data may be transmitted without proper security measures, increasing the risk of breaches and non-compliance with regulations.

Manual processes

Companies rely on error-prone manual processes like copying data or using spreadsheets, leading to discrepancies and inefficiencies.

Lack of scalability

Without a framework, scaling becomes challenging, hindering the addition of new data sources, partnerships, or expansion into new markets.

Lack of real-time information

A data exchange framework ensures timely data flow between systems, enabling up-to-date information for effective decision-making.

POLICIES AND REGULATIONS PERTAINING TO THE SHARING AND EXCHANGE OF DATA

Currently, the below policies govern data exchange:

Data repositories

The government has reference data repositories that are considered primary, accurate, and reliable sources of data, eliminating any duplication or conflicts in the data. The following considerations are taken into account:

1 Government entities responsible for reference data repositories are obligated to comply with data sharing and facilitating its exchange.

They must also prioritise the confidentiality of individuals' personal data and adhere to relevant regulations.

2 Government entities responsible for data repositories are obligated to provide and manage accurate and up-to-date reference data repositories.

3 Government entities, as well as others, are obligated to use a single, trusted, and updated data source for handling data within the country, ensuring consistency. Government entities must refrain from creating separate databases to collect the same data already available in the reference data repositories.

4 Government entities are required to use data in accordance with the reference data repositories.

Data sharing

Government entities are **committed to complying with laws and regulatory provisions** regarding the sharing or exchange of data. There are laws concerning information security and data privacy.

Government entities are **committed to providing accurate, complete, and up-to-date data when sharing it.**

Government entities are **obligated to share or exchange data through the government's digital services portal** and refrain from creating any direct data sharing points between government entities and external parties to safeguard the data security and privacy of government entities and others.

Government entities are **required to commit to sharing or exchanging data** only through the approved mechanisms in the digital government.

Build on digital enablers and capabilities

DIGITAL ENABLERS

Multiple digital solutions already exist, and help enable further technology efficiency

Federal Government Network

Commitment to using the government network, which provides a shared infrastructure enabling all entities to securely access integrated computer resources, as well as linking these entities together.

Government Link for Services

Commitment to sharing and exchanging data through the government link for services.

Digital Signature

Adopting digital signature through the digital identity in all digital government services in the country.

Digital Document Wallet

Adopting the digital document wallet as a tool to verify official documents and records for the service recipient, whether in person or digitally.

The National CRM

Commitment to using the national system for managing customer relationships to register and manage service recipient requirements.

National and Digital Identity

Adopting digital identity and its features in developing their digital services and enhancing the service recipient experience.

Digital Stamp

Adopting digital stamp through the digital identity in all digital government transactions in the country, equivalent to manual stamping.

Use Digital Government Capabilities

Commitment to using all available digital government capabilities when developing proactive and digital government services.

Digital Vault

Adopting secure digital authentication through the digital identity as the sole authorised tool for accessing all digital government services in the country, and commitment to its use.

Leverage automation technologies to drive further efficiency

STANDARD AND ADVANCED TECHNOLOGIES CAN CONTRIBUTE TO EFFICIENCY

One of the central elements of driving efficiency is the adoption and integration of automation technologies.

These have the potential to revolutionise the way governments operate, making them more responsive, accurate, and cost-effective.

1

Standard automation

Robotic Process Automation (RPA) helps automate repetitive and routine tasks in government processes, such as data entry, document processing, and form-filling, freeing up time for public servants to focus on more strategic tasks.

Use Case:

The Australian Taxation Office (ATO) integrated RPA into their systems to automate time-consuming and repetitive tasks. Bots were employed to extract and consolidate data from various sources, validate information, perform calculations and update records. This significantly reduced processing times, improved data accuracy, and enhanced overall efficiency in handling tax related tasks.

2

Real-automation (see more on principle #6 Real-automation)

- **Machine Learning** advanced algorithms derive complex insights and identify patterns, empowering decision-making and helping workers move faster with their activities.
- **Blockchain** enhances transparency, security and efficiency of transactions and record-keeping.
- **Artificial Intelligence** aims for improved customer experience but also drives enhanced operational efficiency, freeing up workers to focus on more important tasks.

Use Case:

The US Citizenship and Immigration Services (USCIS) department has witnessed improved efficiencies after leveraging an AI-powered virtual agent named Emma, which answers basic questions and helps users navigate the website while human experts support with individual, more complex demands.

REAL-AUTOMATION

What is it?

Real-automation aims to make the processes of customer journeys quick and frictionless. Free of inessential bureaucratic processes, it enables government to perform at a higher level.

It automates user inputs based on data and analytics to enhance customer experience and reduce government effort.

By facilitating near-real time insights, quick and empowering decision-making becomes possible. Experiences can be highly personalised, increasing user satisfaction and trust.

Real-automation uses cutting-edge technologies, like Artificial Intelligence and Computer Vision, to go beyond traditional automation. Through real-automation, machines are trained on operating autonomously, continuously learning and making data driven decisions. This allows humans to focus on human experiences that machines cannot replicate.

In contrast, automation uses standard technology, such as Robotic Process Automation, to perform tasks with minimal human intervention, aimed at reducing manual effort and driving efficiency. It is typically focused on rule-based or repetitive activities.

THE IMPACT

Real-automation has the potential to considerably enhance outcomes for society, by delivering innovative and transformative services, allowing governments to meet people's needs in new ways.

How do you bring it to life?

- **Understand real-automation's capabilities to accelerate the next generation of services**
- **Build on existing policies and solutions to design future services**
- **Leverage the full potential of real-automation to transform services**
- **Identify key requirements to enable real-automation**
- **Preempt top implementation challenges that might arise**
- **Enforce safeguards and anticipate potential risks associated with real-automation**

Understand real-automation's capabilities to accelerate the next generation of services

REAL-AUTOMATION HAS CAPABILITIES TO ACCELERATE THE NEXT GENERATION OF GOVERNMENT SERVICES

Real-automation technologies, such as Artificial Intelligence (AI) or Internet of Things (IoT), hold the potential to unlock and accelerate the next generation of government services. Thanks to the Sense, Think, and Execute capabilities, which are detailed hereunder, the opportunities for an improved experience centered around user satisfaction, are endless.

SENSE

Capture the environment: Augment or replace human sensory capabilities, speeding up simple tasks such as data monitoring or visual detection

- Gather data from various sources, including IoT devices, sensors, social media and databases (e.g., Environmental monitoring systems that collect data on air quality, water quality and noise levels to ensure compliance with regulations).
- Extract relevant information from images and videos, identify objects or patterns and detect anomalies (e.g., Surveillance systems that alert authorities about suspicious activities, analysis of street and traffic cameras in real time to make the best use of public transport, reduce pollution and manage the flow of traffic).
- Process and analyse written or spoken language to extract information, sentiment analysis and respond automatically (e.g., conversational AI-powered platforms that help answer common inquiries).

THINK

Make decisions based on the environment: Analyse and process large volumes of data much faster than humans, and in some cases, more effectively.

- Analyse large volumes of data, identify patterns and generate insights to support decision making (e.g. predictive analytics models that use historical data to forecast disease outbreaks, anticipate traffic congestion or predict housing demand for urban planning, propose more personalised healthcare plans based on healthcare analysis of patient information).
- Understand and interpret complex data, and make recommendations (E.g., assist in complex decision-making processes, such as assessing eligibility for social benefits based on individual circumstances and program requirements.

EXECUTE

Carry out those decisions: Take simple decision-making tasks off humans – freeing up time for front-line workers to focus on activities that improve services and customer experience.

- Magnetic resonance (MR) imaging is crucial for precise medical diagnoses, but the growing demand for MR scans requires improved efficiency and shorter wait times. AI-based image reconstruction can accelerate MR exams, enhancing productivity and cost-effectiveness. It provides high-resolution images that increase diagnostic confidence and improves accessibility for stressed or anxious patients. Shorter exams and accurate scans enhance the patient experience and reduce scanning time thus freeing up valuable diagnostic resources.

USE-CASES

Fraud detection
(e.g., AI-powered system for government welfare program)

Integration of data from government databases, financial institutions, and other sources to create a comprehensive dataset for fraud detection (e.g., transaction records, beneficiary information and external data feeds).

Machine learning models that analyse transaction patterns, beneficiary profiles, and historical fraud cases to detect potential fraud indicators.

Automated alerts sent to fraud detection units within government agencies, triggering investigations and potential actions against fraudulent activities.

User support
(AI-powered chatbot for conversational services)

Chatbots integrated into government websites or mobile apps, collecting data from users seeking information or assistance.

Natural language processing algorithms that understand user inquiries and retrieve information from government databases or knowledge bases.

AI-powered agents offering 24/7 support to citizens, answering frequently asked questions, guiding users through the application process for government programs, and providing relevant links or forms.

Job seeker support

Leverage various sources of data (e.g., work history, educational background, socioeconomic circumstances) to optimise the types of supplemental support that employment agencies offer based on interventions that were most effective for similar job seekers.

Former employer reports the job loss of an employee to the government, which automatically enrolls that person in all relevant qualifying services (e.g., unemployment, food assistance, medical assistance or any other government services benefits).

REAL WORLD APPLICATIONS

Digital healthcare services

Integrating Healthcare Data and AI for advanced care by leveraging Automated Scheduling, Prescription Management, and Telemedicine.

Integration of healthcare data from hospitals, clinics, and wearable devices to create comprehensive electronic health record (electronic medical records, patient-generated health data, and real-time health monitoring from medical devices or wearables).

AI algorithms analysing medical data to provide clinical decision support, predict disease progression, or recommend personalised treatment options.

Automated appointment scheduling, electronic prescription management, and remote patient monitoring using telemedicine technologies.

Smart Nation

Smart cities play a crucial role where various systems and services are integrated to enhance the quality of life for residents (optimise energy consumption, manage traffic flow, monitor air quality and improve waste management).

Sensors installed in public transportation systems, smart energy meters, air quality monitoring stations, and waste management infrastructure.

AI algorithms that analyse transportation data to optimise traffic flow, predict energy demand for efficient resource allocation, or analyse waste management data to optimise collection routes.

Automated traffic management systems that adjust traffic signals based on real-time congestion patterns, personalised mobile applications providing real-time public transport information, or intelligent waste management systems that optimise collection routes based on fill levels of bins.

Smart automation for clinical administration

Humana created Allie to streamline outdated and repetitive processes to improve patient health outcomes and boost healthcare business efficiency.

Redundant administrative tasks, such as clinical auditing and medical chart reviews, hinder clinicians from performing at their optimum, affecting both patient outcomes and healthcare business interests.
Allie's Citizen Development (CD) program fosters a cross-functional team consisting of various stakeholders and experts beyond IT, to envision clinician-centered solutions and implement key process improvements.
For e.g. The CD team collaborated with pharmacists and nurses to automate the manual process of collecting patients' health information. Allie automates data collection and uses this to categorize prescriptions by risk level, directing them to the relevant healthcare specialist for review when needed. This approach leads to efficiency gains and reduced risk, benefitting Humana, clinicians, and most importantly, patients.
In six months, Allie restructured 35 Humana processes, improving customer service, transparency, and resource use, while reducing time-to-value from months to weeks. Handling real-time processing of millions of claims and prescriptions annually, Allie reduces administrative tasks, granting clinicians 15% more time for patient care.

CUSTOMERS BENEFITS
IMPROVED EXPERIENCE

Smart use of real-automation can therefore enable outstanding levels of experiences:

Reliable

Eliminates errors and inconsistencies caused by human error, leading to more accurate data and results.

Simple and convenient

Eliminates the need for users to physically visit government offices, stand in queues, or fill out paper forms. Instead, they can access services conveniently online or through mobile applications from anywhere and at any time. This saves time and effort for users.

Secure

Helps governments detect and prevent fraud, cyberattacks, and other security threats. This is particularly important in areas such as national security and border control.

Fast

Reduces the time required to achieve operational results by minimising latency and provide near real time insights, empowering and informing decisions. This is particularly important in areas such as public health, where quick decision-making can be crucial.

Empathetic

Frees up government employees to focus on higher value tasks which allows them to focus on human interactions and provide necessary support when needed.

Personalised and anticipatory

Personalises customer experiences by analysing data and understanding individual preferences. This allows for tailored recommendations, proactive notifications, and personalised assistance in navigating government services.

GOVERNMENTS BENEFITS
BETTER OUTCOMES

By strengthening their services to provide outstanding customer experience, governments can generate several benefits:

Increased trust

Across various nations, satisfied users tend to have higher levels of trust in their governments and perceive them as effectively fulfilling their objectives.

Satisfied users

Satisfied users are less likely to make repeat appointments, resulting in a well-functioning system with fewer unnecessary visits. However, dissatisfied users are more likely to return with unresolved issues and may resort to public complaints or legal action.

Quick and effective assistance

Quick and effective assistance, free of needless bureaucratic processes, can uplift the morale of government employees, which in turn reinforces the quality of service they provide.

Moreover, real-automation supports with:

Decision making

Greater support for government leaders in making strategic decisons. Real-automation can help governments by analysing specific outputs and submetrics and then determining the initiatives most likely to make an improvement.

Social understanding

The ability to guage customers' happiness is enhanced. Real-automation can be leveraged to capture and analyse users' perspectives which is better than conducting surveys and enables faster action by the government.

Build on existing policies & solutions to design future services

POLICIES PAVING THE WAY TO REAL-AUTOMATION

THE ASK ONCE POLICY

Through the Ask Once policy, a unified database consolidates citizens' and residents' information from various government entities. This database serves as a centralised hub for collecting and verifying data, eliminating the need for individuals to repeatedly provide the same information to multiple government agencies. The Ask Once policy paves the way for real-automation technologies in several ways.

Data management and integration

This centralised database is a rich source of data and serves as a foundation for real-automation enabling efficient data management, analysis and sharing.

Analytics

The centralised database serves as a valuable data source for training AI models. AI algorithms can be developed to automate tasks such as natural language processing, predictive analytics, and decision-making. Advanced analytics techniques, including machine learning and data mining, can extract valuable insights from the data, supporting evidence-based decision-making.

Streamlined processes and framework

The ask once policy creates a framework that supports the integration of other real-automation technologies (e.g., computer vision).

Data security and trust

The ask once policy can be expanded to incorporate blockchain standards. This would increase the security, immutability and transparency of data. Smart contracts would automate trusted transactions between different parties, enhancing efficiency and transparency.

LET US IMAGINE THE ART OF THE POSSIBLE FOR HOW REAL-AUTOMATION COULD ENHANCE THE UNIFIED DIGITAL IDENTITY (CURRENTLY UAE PASS)

Personalised and proactive experiences

Advanced Machine Learning and AI algorithms can analyse user preferences and behaviour, enabling very personalised recommendations and tailored experiences.

Enhanced security and trust

Blockchain can provide a decentralised and tamper-proof identity management system, ensuring secure access and protecting user data from unauthorised modification.

Streamlined authentication and verification

Computer vision assists in document verification and automates information extraction.

Virtual service centres and collaboration

Through the metaverse, virtual representations of government service centres can be offered, enabling users to access services and interact with virtual agents.

Context aware services

With IoT data, such as location and environmental information, personalised and context aware services can be delivered to users.

Virtual assistance and document signing

Virtual assistants can integrate within the platform, providing interactive support to any question, and step by step guidance.

THE ART OF THE POSSIBLE
FOR CUSTOMERS' EXPERIENCES

As customers experiences improve with real-automation, satisfaction and trust in governments increase. Services become fully automated and powered by cutting-edge real-automation techniques, which allow fast, convenient, and reliable service delivery.

EXAMPLE

Buy a House

Let us imagine a futuristic fully automated experience leveraging real-automation for **Faris** (the persona of 35 years old, Jordanian), who wants to buy a house

1. Property Search

Faris accesses an advanced real estate platform

The platform leverages UAE Pass for secure authentication. Faris answers a few questions. An AI-enabled system understands the requirements and preferences (type of property, location, size, and other criteria). The system uses AI algorithms to present a curated list of properties that matches the requirements.

2. Virtual Property Tours

Faris takes virtual tours using advanced AR/ VR technologies

The platform allows him to immerse himself in a realistic 3D representation of the properties, exploring every room, amenities, and even the surrounding neighborhood. He can interact with virtual agents who provide information and answer queries in real-time. He can also visit those properties in the metaverse.

3. Digital Documentation

Once Faris finds a property that he likes, the platform streamlines the documentation process

Faris provides a digital identification through UAE Pass, eliminating the need for physical paperwork. The system automatically verifies identity, financial records, and other necessary documents. Smart contracts powered by blockchain technology are used to create legally binding agreements and handle transactions securely.

4. Automated Financial Assessment

The platform integrates with banks and financial institutions to automate the mortgage approval process

Based on Faris's financial profile, the system quickly assesses his eligibility and provides instant mortgage pre-approval. It considers factors such as income, credit history, and property value to calculate the loan terms, interest rates, and repayment schedules.

5. Intelligent Negotiations

To negotiate the price or terms, an AI-powered negotiation system can handle the process

It utilises historical market data, property valuations, and buyer/seller preferences to arrive at a fair and optimised agreement. The negotiation system communicates with the seller's AI agent. Once an agreement is reached, and after Faris's approval, it generates the updated contract.

6. Secure Transactions

To facilitate the financial transactions securely, the platform integrates with digital payment systems and UAE Pass

Faris can make secure payments for deposits, down payments, and other fees directly through the platform, eliminating the need for traditional bank transfers or checks. The transactions are verified and recorded in a transparent and immutable manner using blockchain technology.

7. Seamless Handover

As the purchase progresses, automation technologies facilitate a smooth handover process

The platform provides Faris with a checklist of tasks, such as property inspections, utility connections, and registration of ownership, ensuring each step is completed efficiently. It also integrates with relevant government agencies to automate processes like title transfers and issuance of occupancy certificates.

8. Post-Purchase Services

After the purchase, the platform continues to assist with post-purchase services

It can provide recommendations for interior designers, contractors, and home services based on preferences. Faris can also access an integrated platform for managing property-related tasks, such as maintenance requests, bill payments, and community interactions.

Leverage the full potential of real-automation to transform services

REAL-AUTOMATION TECHNOLOGIES
MOST RELEVANT TO GOVERNMENT SERVICES

The adoption in government services varies based on needs, priorities and resources of each government entity. However, in general, the most relevant realautomation technologies have the potential to transform services.

Artificial intelligence

Analyse data, learn patterns and make decisions without human intervention. Machine Learning, Deep Learning and Natural Language Processing are some of the subfields of AI.

Widely used in government services for data analysis, decision-making, pattern recognition and predictive analytics.

Internet of things

Be integrated into smart city infrastructure to enable real-time monitoring and control of traffic, public utilities, and other public services. IoT can also help in disaster management, environmental monitoring, and energy management.

Computer vision

Enables machines to process visual data allowing them to recognise people, objects and actions. Can be used in security and surveillance applications, such as facial recognition and license plate recognition, to enhance public safety and law enforcement.

Blockchain

Improve transparency, security, and efficiency in various government services, such as land registration, voting, supply chain management, and identity verification.

AR/ VR

Transform various aspects of government services by providing immersive, interactive and engaging experiences.

TYPES OF TECHNOLOGIES

TYPES OF SERVICES	Artificial Intelligence	Computer Vision	IoT	Blockchain	AR/ VR
Identity & Authentication Services	✓	✓	✓	✓	
Social Welfare Services	✓	✓		✓	
Taxation & Revenue Management	✓	✓		✓	
Licensing & Permitting	✓	✓		✓	
Education & Student Services	✓	✓		✓	✓
Healthcare & Public Health Services	✓	✓	✓	✓	✓
Public Safety & Law Enforcement	✓	✓	✓	✓	✓
Transportation & Infrastructure Services	✓	✓	✓	✓	✓
Environmental & Conservation Services	✓	✓	✓	✓	✓
Administrative & Citizen Services	✓	✓	✓	✓	✓

Identify key requirements to enable real-automation

Successful real-automation adoption requires a set of foundational elements related to government, people and technology

GOVERNMENT

Governance

clear governance model (e.g. data) with stakeholders involved.

Policy and regulatory framework

Alignment with relevant policies and regulations.

Collaboration and partnerships

across entities, as well as with private sector partners, academia, and others.

TECHNOLOGY

Data management and analytics

- Efficient collection, storage, organisation, integration and use of data (e.g., quality, privacy & security, accessibility, interoperability)
- Data gaps management (e.g., external third parties, proxies, synthetic data development).

IT infrastructure and technology

- Modern infrastructure and tools required to ingest and process data (e.g., cloud computing coupled with robust cybersecurity).

Performance monitoring and evaluation

- Framework to track projects and refine them as needed.

PEOPLE

Leadership buy-in and vision

- Strong leadership with top-down sponsorship to drive adoption and maturity.
- Clear vision and strategy, aligned with the broader government's strategy, coupled with an action plan (e.g., real-automation roadmap) that includes goals and milestones dependent on the budget.
- Change management strategy (e.g., support to reskill and upskill employees).

Collaborative and entrepreneurial mindset

- Cross-entity alignment and collaboration (e.g., data sharing culture)
- Culture that believes in failing fast, putting fear aside and experimenting.

Team with the right capabilities

- Task force to drive the strategy and roadmap under leadership
- Specific roles, responsibilities and skills development at different levels (e..g, trainings, pod team per use case combining functional/ industry and technical competencies).

EXAMPLE

Governments around the world are taking action to increase the skills of their public workforce

Institute for Public Management and Economic Development (IGPDE), offers training courses (E.g., Artificial intelligence, data science: New economic challenges) to equip public servants with basic knowledge about AI and its opportunities and challenges.

AI workshops open to public officers and, in particular, middle and senior managers, to increase digital literacy and provide foundational knowledge about the potential of AI for public work and public organisations.

Preempt top implementation challenges that might arise

Some of the common pitfalls that typically inhibit the ability to quickly adopt and deploy real-automation

Limited alignment

- Lack of effective cross-entities collaborations, between functional / industry and technical teams.
  - Implement mechanisms to break silos and push for collaboration.

Data gaps

- Sourcing high quality data and processing, especially with limited data sharing culture.
  - Implement strategies to fill data gaps (e.g., partnership with external parties).

Data accessibility and quality

- Data silos, outdated systems and inconsistent quality.
  - Start by conducting data assessment and putting in place a data management strategy.

Talent scarcity

- High competition for the right talent especially with private sector.
  - Reskill and upskill government employees.
  - Leverage external partner capabilities.

Lack of trust

- People's concerns around bias, privacy and accountability.
  - Include transparency in the use of real-automation.

Change management

- Resistance to change and legacy systems.
  - Push shift in mindset, train new systems skills and adapt organisational structures and processes.

Enforce safeguards and anticipate potential risks associated with real-automation

Despite real-automation's potential to unlock transformative services, governments will have to identify and manage multiple risks that those new technologies pose to make sure their deployment is ethical and human-centered

	RISKS	POTENTIAL COUNTER-ACTION	EXAMPLE OF GOVERNMENT INITIATIVE
1	**Privacy** The use of real-automation can potentially infringe on individual privacy rights, leading to increased surveillance and potential misuse of personal information.	Implement data protection laws and regulations, limit data collection, manage accessibility and use anonymisation techniques where possible.	**GDPR (General Data Protection Regulation) provides strong protections for individual privacy and gives people more control over their personal data**
2	**Security** real-automation systems can be vulnerable to hacking or other security breaches, potentially compromising sensitive data.	Ensure robust cybersecurity measures are implemented with regular updates. Conduct audits frequently.	**The U.S. Cybersecurity and Infrastructure Security Agency (CISA) provides guidelines and resources for improving cybersecurity**
3	**Biases** Algorithms may inadvertently incorporate and propagate biases present in the training data, which would result in unfair treatment of certain groups.	Use diverse and representative training dataset, conduct bias audits.	**The U.S. National Institute of Standards and Technology (NIST) has developed standards for measuring and mitigating bias in AI**
4	**Unemployment** there is a risk of job loss as real-automation progresses and replaces some of the manual human effort.	Upskill and reskill, knowing new jobs will emerge and the goal is to empower people to focus on higher value tasks.	**SkillsFuture initiative aims to provide citizens with opportunities for lifelong learning and skill development**
5	**Ethical issues** The implementation of real-automation may raise ethical concerns, such as the appropriate use of technologies in decisions that impact people's lives.	Develop ethical guidelines, ensure ethics are part of the development and implementation processes (team with the right skills).	**The UK's Center for Data Ethics and Innovation provides guidance on the ethical use of AI and data-driven technology**
6	**Digital divide** The use of real-automation can potentially infringe on individual privacy rights, leading to increased surveillance and potential misuse of personal information.	Ensure equitable access, provide digital literacy training and design with accessibility in mind.	**France's Institute of Public Administration and Economic Development (IGPDE) provides training courses on various topics. These courses aim to equip public officials with essential knowledge about AI, its opportunities, and challenges**
7	**Dependence** Over-reliance on real-automation systems may accelerate a loss in skills and expertise.	Cultivate human skills and maintain a balance between real-automation and human involvement.	**SkillsFuture initiative aims to provide citizens with opportunities for lifelong learning and skill development**

Glossary

Glossary

Service Categories

Informational Services: These services involve the transfer of information from the government to the users. They can be initiated by the government, such as training programs or awareness campaigns, or in response to user requests.

Procedural Services: This type encompasses all forms of services that meet a user's specific needs and involve transactional processes, such as issuing a birth certificate.

Commercial Services: This category includes services provided with the purpose of generating revenue for the government, such as selling geological maps or national statistics etc.

Social Services: This group includes services offered by the government to enhance the well-being of society or a specific group within it, such as healthcare services.

Regulatory Services: This category includes all services that users are required to comply with, such as regular inspection processes.

A/B testing: A method that compares two versions to determine which performs better by dividing a sample audience into two groups and analysing results.

Adaptive learning: A method that compares two versions to determine which performs better by dividing a sample audience into two groups and analysing results.

Accessibility: Designing products, services, or environments that can be accessed and used by all individuals, regardless of abilities, by removing barriers and ensuring inclusive access .

Agile: A flexible project management approach emphasising collaboration, iterative progress, and adaptive planning, allowing for quick responses to change throughout the project lifecycle.

Application Programming Interface (API): set of rules and protocols that allows different software applications to communicate and interact with each other.

Artificial Intelligence (AI): simulation of human intelligence in machines, enabling them to perform tasks that typically require human intelligence, such as problem-solving, learning, and decision-making.

Augmented Reality (AR): technology that superimposes digital information, such as images or data, onto the real world, enhancing the user's perception and interaction with their environment.

Blockchain: decentralised and distributed digital ledger that records transactions across multiple computers, providing transparency, security, and immutability.

Branding: process of creating a distinctive identity and perception for a product, company, or individual in the minds of customers, usually through strategic design, messaging, and positioning.

Chatbot: computer program designed to simulate conversation with human users, typically through text or voice interfaces, to provide automated responses and assistance

ChatGPT: large language model developed by OpenAI that uses deep learning techniques to generate human-like text responses based on given prompts or queries.

Computer Vision: field of artificial intelligence and computer science that focuses on enabling computers to interpret and understand visual information from images or videos.

Data Analytics: process of examining and interpreting data to uncover meaningful patterns, insights, and trends that can inform decision-making and improve business outcomes.

Digital Authentication: process of verifying the identity of individuals or entities in digital systems, often using passwords, biometrics, or cryptographic methods.

Digital Enabler: Technologies, tools, or systems that empower and enable digital transformation within organisations by enhancing productivity, efficiency, and innovation.

Digital Identity: representation of an individual or entity's unique digital characteristics, including personal information, credentials, and attributes, used for identification and access to digital services.

Digital Proficiency: ability to effectively and confidently use digital technologies and tools to perform tasks, solve problems, and communicate in a digital environment.

Data repositories: Centralised storage systems or databases that securely store and manage data, making it easily accessible for retrieval, analysis, and sharing

Digital Signature: cryptographic mechanism that provides authentication, integrity, and non-repudiation of digital documents or messages, confirming the identity of the sender and ensuring the integrity of the content.

Digital Stamp: electronic mark or certification applied to digital documents or transactions to indicate authenticity, integrity, or compliance with certain standards or regulations.

Digital Wallet: software application or device that securely stores digital payment credentials, such as credit cards or cryptocurrencies, allowing users to make electronic transactions conveniently.

Interactive Voice Response (IVR): telephony technology that allows callers to interact with a computerised voice system using voice or keypad inputs, commonly used for automated customer service or routing calls.

Internet of Things (IoT): network of physical objects or devices embedded with sensors, software, and connectivity, enabling them to collect and exchange data, and interact with each other or the environment.

Large Language Model (LLM): sophisticated AI model capable of processing and generating human-like text, often trained on a vast amount of textual data to learn patterns and context.

Low Code: software development approach that utilises visual interfaces and pre-built components to simplify and expedite application development, requiring minimal coding.

Machine Learning (ML): branch of artificial intelligence that focuses on developing algorithms and models that allow computers to learn from data and improve performance on specific tasks without being explicitly programmed.

Modular Design: breaking down a system or product into independent modules that can be combined or modified easily for flexibility and scalability.

Natural Language Processing (NLP): AI technology that enables computers to understand and interact with human language through techniques like text analysis and voice recognition.

Near-real time: information processing or communication that occurs with minimal delay, providing data or updates that are almost instantaneous.

Government Product Lifecycle: stages a product goes through, from its inception and development to its retirement or discontinuation, including design, production, marketing, and support.

G2C Services: are services provided by the government entity to individuals (such as citizens, residents, and tourists).

G2B Services: are services provided by the government entity to companies, institutions, business owners, and professionals.

G2G Services: are services provided by the government entity to other government entities, whether they are federal or local.

Product-Market fit: alignment between a product's features, benefits, and value proposition with the needs and preferences of a specific target market, indicating the product's suitability and potential success.

Roadmap: visual representation or plan that outlines the strategic direction, goals, and major milestones of a project or product development, guiding decision-making and providing a timeline for implementation.

Robotic Process Automation (RPA): use of software robots or bots to automate repetitive, rule-based tasks and processes typically performed by humans, increasing efficiency and reducing errors.

Release Management: process of planning, scheduling, and coordinating the deployment and release of software or product updates, ensuring smooth transitions and minimising disruptions.

Scope Creep: uncontrolled expansion or addition of features, requirements, or objectives in a project beyond its original scope, leading to timeline delays, cost overruns, and potential quality issues.

Search Engine Optimisation (SEO): practice of optimising a website or online content to improve its visibility and ranking in search engine results, increasing organic (non-paid) traffic and exposure.

Sensor: device that detects and measures physical or environmental input, such as light, temperature, pressure, or motion, and converts it into electrical signals for further processing.

Service Quality Assurance: process of ensuring that services meet or exceed predefined quality standards and customer expectations through monitoring, evaluation, and improvement initiatives.

Service Level Agreement (SLA): contract or agreement that defines the expected level of service quality, performance, and availability between a service provider and a customer.

Sign Language Processing (SLP): field of research and technology focused on analysing, recognising, and synthesising sign language gestures or movements using computer vision and machine learning techniques.

Smart City: city that leverages advanced technologies, data analytics, and Internet of Things (IoT) devices to enhance infrastructure, services, and sustainability, improving the quality of life for its residents.

Social Media: Online platforms and websites that enable users to create, share, and interact with content and connect with others, facilitating communication and networking on a global scale.

Single Sign On (SSO): mechanism that allows users to access multiple applications or systems with a single set of login credentials, improving convenience and security.

Usability: mechanism that allows users to access multiple applications or systems with a single set of login credentials, improving convenience and security.

User Experience (UX): overall experience and perception of a user when interacting with a product, system, or service, encompassing factors such as usability, aesthetics, and emotional satisfaction.

User Stories: Short, narrative descriptions of specific user interactions or requirements that capture the essence of a user's goals, needs, and expected outcomes, often used in agile software development.

Value Stream Mapping: A visual representation and analysis of the steps, activities, and flow of materials or information required to deliver a product or service, aiming to identify areas of waste, inefficiency, and improvement opportunities.

Virtual Reality (VR): Simulated computer-generated environment for immersive experiences.

Waterfall: Sequential project management approach with linear phases.

World Wide Web Consortium: International organisation developing web standards.

About

Emirates Government Service Excellence Program (EGSEP)

Our vision

“To become the global leader in delivering exceptional services as a government”

Our strategic priorities

Enhance the **quality of life** and the wellbeing of our society

Build trust between government and society

Ensure the **sustainability** of government services

Enhance **global competitiveness**

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